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# PLANT INTRODUCTIONS

THIRTEENTH ANNUAL LIST

1924-1925

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CONTAINING DESCRIPTIONS OF THE MORE IMPORTANT  
INTRODUCED PLANTS NOW READY  
FOR EXPERIMENTERS

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OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION  
BUREAU OF PLANT INDUSTRY  
UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C.

All plants intended for distribution to experimenters are inspected at the Plant Introduction Gardens by officers of the Federal Horticultural Board. At the time this Annual List goes to press the inspection has not been made. It is possible, therefore, that quarantine regulations may prohibit the distribution of a few plants herein described.

## PLANT INTRODUCTIONS.

Experimenters will please read carefully this Introductory

Note before sending in their requests for plant material.

This, the Thirteenth Annual List of Plant Introductions, contains descriptions of many new and rare plants, not yet widely tested in this country. The available information concerning some of them is meager, and it is therefore impossible to speak with assurance regarding their value, their cultural requirements, and their adaptability to the various climates and soils of the United States.

These plants have been imported because of some direct or indirect use which, it is believed, can be made of them. They are first placed at the disposal of the experts engaged in plant breeding, crop acclimatization, and horticultural investigations generally in the United States Department of Agriculture and the State Experiment Stations. Many of them have been grown in sufficient quantity, however, so that they can be distributed to private experimenters who have the facilities to test them carefully. The List is therefore sent to those who have qualified as Experimenters with the Office of Foreign Seed and Plant Introduction, and who have indicated a willingness to care for material sent them.

Accompanying this Annual List are complete Check Lists showing all seeds and plants available for distribution at the several Plant Introduction Gardens during the season 1924-25. Applicants for material should fill out all blanks at the top of the Check List of each garden from which they request plants, place a mark to the left of the S.P.I. (Seed and Plant Introduction) number of each plant desired, and return the lists promptly to this Office.

It should be distinctly understood that the Office does not agree to supply all the plants requested. The object of the Annual List and the Check Lists is to place experimental material where it is thought the chances of success are best; to this end the experts of the Office will allot the available number of plants to those experimenters whose location and facilities seem most suitable, having in mind, at the same time, the order of receipt of the returned check lists, and giving preference to those which arrive first.

The shipping season extends, as a rule, from December first to April first. Because of the large quantity of plants which must be handled, it is difficult for the Office to single out individual requests and ship them at a certain date; where there are, however, valid reasons for requesting that material be sent at a specified time, every effort will be made to meet the requests.

These plants are placed in the hands of experimenters with the understanding that reports on their behavior will be sent to this Office from time to time. It is particularly desired that reports be sent to this Office regarding the flowering, fruiting, hardiness, utilization and other interesting features of plants which have been sent for trial; and it is



hoped that experimenters will at all times exercise care to preserve the original labels sent with the plants, or accurate plats showing the location and S.P.I. number of each one.

It will be necessary for experimenters to preserve and refer to the Annual List of Plant Introductions, or to the Inventories published by the Office, for information regarding the plants. Each Inventory lists the seeds and plants imported during a period of three months. Its object is to serve as an historical record; it is not printed immediately following the arrival of the plants, but eighteen to twenty-four months later. The edition is limited, and it cannot be supplied to all experimenters. This makes essential the preservation of the Annual List as a work of reference, and the Office desires to urge upon its cooperators the importance of this step. Unless the Annual Lists are preserved, the Office will be flooded with inquiries from people who have received plants, and who desire information concerning them. Such inquiries involve much unnecessary labor and expense.





DESCRIPTIVE LIST.

59672. *ACACIA AURICULAEFORMIS*. From Lucknow, India. Presented by F. H. Johnson, Government Horticultural Gardens. A small tree, native to Queensland and other regions in northern Australia. Its phyllodia or apparent leaves are five to eight inches long, oblong in outline, while its very hard seed pods are twisted to form an irregular spire. For trial in the southwestern states and California.

58379. *ACACIA SCORPIOIDES*. From Giza, Egypt. Presented by the Ministry of Agriculture. A large proportion of the gum arabic of commerce is furnished by this tree, which is native to northern Africa and southwestern Asia. The pods and bark are used in tanning, and the foliage is fed to cattle. The wood, which is hard and durable, is used in India for making tools. This small tree should be tested in California, the southwestern states, and in Florida.

55422. *ACACIA SPIROCARPA*. From Africa. Presented by E. E. Massey, Khartum, Anglo-Egyptian Sudan. An umbrella-like tree 20 to 40 feet high, native to Abyssinia, where it is common on arid and rocky land. The snow-white flowers are borne in large clusters, and the narrow, spirally twisted pods are ornamental. Probably susceptible to frost.

54799. *ACACIA VEREK*. Gum-arabic Tree. From Africa. Presented by Maj. R. G. Archibald, Wellcome Tropical Research Laboratories, Anglo-Egyptian Sudan. A small tree which thrives in semiarid climates where heavy frosts are not experienced. It yields a fine quality of gum arabic. Suggested for trial in mild-wintered portions of the south-western United States.

56288. *ACER DAVIDI*. Maple. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. An attractive shade tree, with large coarsely toothed leaves which turn bright yellow or purple in autumn. From the Likiang Snow Range, where it attains a height of 60 feet. It is not altogether hardy at Boston, Massachusetts.

55340. *ACTINIDIA CHINENSIS*. Yang Tao. Presented by D. W. Coolidge, Pasadena, California. An ornamental deciduous climber, native to Szechwan, China. This plant has attracted considerable attention because of its edible fruits, which may be eaten from the vine, served with sugar and cream, or used for jams and sauces. They are russet brown, hairy, about 2 inches long, and have greenish flesh of pleasant flavor, resembling that of gooseberries but tempered with a taste peculiarly their own. The leaves have a plush-like texture and an unusual dark-green color, and their large size and regular spacing add to the beauty of the vine. The flowers are buff-yellow to white, fragrant, about an inch broad, and are produced in great abundance. Hardy south of Washington, D. C., but it may be grown farther north if taken down in autumn and covered with leaves or litter.

56608. *ACTINIDIA CHINENSIS*. Yang Tao. From China. Presented by Geo. B. Newman, Chengtu, Szechwan.



42633. *ACTINIDIA CORIACEA*. Received from Vilmorin-Andrieux & Co., Paris, France. A strong-growing, woody vine native to central China; it is useful for covering arbors and pergolas, and for training over porches. The leaves are large and leathery, and the clusters of red or rarely yellow, sometimes white-margined flowers, and small, spotted berries, make it highly ornamental. Its cultivation is practicable only in mild-wintered regions.

54524. *AESCULUS TURBINATA*. Japanese Horse-Chestnut. Presented by John Dunbar, assistant superintendent of Parks, Rochester, N. Y. In general appearance this tree is similar to the common horse-chestnut. It is said to grow more slowly than the latter, and its leaves are somewhat larger. In Japan it becomes a tree 80 to 100 feet high, and the wood, which shows a wavy grain, is used for making house fittings and small articles generally. The creamy white flowers, in erect panicles 6 to 10 inches long, are produced two or three weeks later than those of the common horse-chestnut. Hardy as far north as Boston, Mass.

56636. *ALNUS NEPALENSIS*. Alder. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A tree from the mountains of Yunnan, where it sometimes reaches 70 feet in height, and has a trunk 3 to 4 feet thick. It is a very rapid grower, and thrives on moist ground. It should do well on river bottoms and the banks of streams. Probably not hardy enough for cultivation in the northern United States, but likely to prove of value in the south and on the Pacific coast.

58670. *AMPELOCISSUS MARTINI*. From Manila, Philippine Islands. Presented by P. J. Wester, Bureau of Agriculture. A tropical climber, known as Bika in the Philippines. It is attractive in appearance, with leaves dark green above and russet beneath. The fruits, which are produced in large clusters, suggest Delaware grapes; they are dark maroon to black, with juicy, acid flesh. They can not be eaten raw, but yield an excellent jelly. For trial in tropical America, and the warmest parts of southern Florida.

24807. *AMYGDALUS PERSICA*. Peach. From Tashkent, Turkestan. Collected by N. E. Hansen, Agricultural Explorer. A small white freestone peach, with melting juicy flesh of unusually delicate texture. It is highly flavored, and an excellent peach for the home garden, but too small to be valuable commercially. At the Plant Introduction Garden, Chico, California, it has shown promise as a rootstock on which to graft other peaches.

32374. *AMYGDALUS PERSICA*. Peach. This variety originated at the Government Experiment Farm, San Antonio, Texas, among a lot of plants grown from seeds secured in Mexico by Onderdonk. It is a medium-sized clingstone fruit, with golden yellow flesh, firm, sweet, of good texture, and unusually fine flavor. Promising for home canning purposes. At Chico, California, it matures in late August; at San Antonio, Texas, about the first of September.



35201. AMYGDALUS PERSICA. Peach. From Mengtsze, Yunnan, China. Presented by the Commissioner of Customs. The fruit of this variety is a golden cling with firm, pure yellow flesh of good quality. A promising peach for commercial purposes.

35485. AMYGDALUS PERSICA. Peach. From the Kuram Valley, north-western India. Obtained through Major G. J. Davis, Commandant, Kuram Militia. This remarkable peach, originally secured from India under the name of Shalil, is of vigorous growth and unusual leaf habit. The fruit somewhat resembles Muir in general appearance; it is oval, with yellow skin; bright yellow, fairly firm, juicy flesh; and rather large pit. J. E. Morrow, superintendent of the Chico Garden, reports that it seems satisfactory for canning and drying; and its seedlings are being used with excellent success as rootstocks on which to graft other varieties.

41395. AMYGDALUS PERSICA. Dwarf Peach. From Kaying, Kwangtung Province, China. Presented by George Campbell, who described it as a curious variety cultivated in southern China as a pot plant. At the Plant Introduction Garden, Chico, California, it has been found to be quite unusual in character. The tree is short, stout, and spreading in habit, and has long, dark, very abundant foliage. The flowers are pink, and highly ornamental. The fruits, of which only a few have been produced at Chico up to the present, appear to be white clingstones of no particular merit. The tree has shown itself highly susceptible to leaf curl and other fungous diseases.

43127. AMYGDALUS PERSICA. Ideal Peach. From New Zealand. Presented by H. R. Wright. This is one of the best New Zealand peaches yet introduced into the United States. At the Plant Introduction Garden, Chico, California, it has shown promise for table use, shipping, drying, and possibly canning. The fruits are of good size, with firm, golden yellow flesh of excellent quality. At Chico the ripening season is late July.

43129. AMYGDALUS PERSICA. Late Champion Peach. From New Zealand. Presented by H. R. Wright. A large fruit with bright-yellow skin having a red blush. The flesh is bright yellow, juicy, and of good flavor. Recommended by Mr. Wright as one of the best late freestone peaches, a fair shipper, a good drier, and well adapted for canning. At the Plant Introduction Garden, Chico, California, the season of ripening is early September.

43130. AMYGDALUS PERSICA. Lippiatt Peach. From New Zealand. Presented by H. R. Wright. A medium-sized clingstone, considered promising for table and home canning. The fruits are yellow, over-spread with a red blush; flesh firm, and of very good flavor; pit red. The season of ripening at the Plant Introduction Garden, Chico, California, is late August. Originally introduced as Lippiatt's Late Red.



43134. AMYGDALUS PERSICA. Osprey Improved Peach. From New Zealand. Presented by H. R. Wright. A good sized, light-colored peach of good quality. It is too soft for shipping, but is recommended for home use by Mr. Wright, who reports it a dependable bearer.

43135. AMYGDALUS PERSICA. Paragon Peach. From New Zealand. Presented by H. R. Wright, who recommends it as a standard New Zealand variety, and a dependable bearer. At the Plant Introduction Garden, Chico, California, it has shown characteristics which indicate that it will not have commercial value in this country. It is a clingstone, with yellow flesh of good quality, the suture deep and the pit large.

43136. AMYGDALUS PERSICA. Shipper Cling Peach. From New Zealand. Plants presented by H. R. Wright. This large, clingstone peach is attractive in appearance and of good quality. The skin is orange-yellow with a red blush, the flesh yellow and excellent in flavor. Since the fruit retains its form when cooked it is recommended by Mr. Wright as of value for canning.

43137. AMYGDALUS PERSICA. Up-to-Date Peach. From New Zealand. Plants presented by H. R. Wright. Described as a vigorous-growing, heavy-yielding variety producing large, freestone, yellow-fleshed peaches of excellent quality. The fruits are too delicate in texture to withstand shipment to distant markets, but for canning and home use they are said to be excellent.

43289. AMYGDALUS PERSICA. Peach. From Canton, China. Presented by P. R. Josselyn, American Vice Consul, who sent seeds from which numerous trees were grown at the Plant Introduction Garden, Chico, California. One of the best of these has been selected for propagation by budding; it is a small white freestone with sweet flesh and a red pit. Of interest for home use only. In China this variety is called "Ying Tsui" or "Eagle's Beak."

43291. AMYGDALUS PERSICA. Peach. From Canton, China. Presented by P. R. Josselyn, American Vice Consul, who sent seeds from which numerous trees were grown at the Plant Introduction Garden, Chico, California. One of the best of these has been selected for propagation by budding; its fruits are small white freestones, with exceedingly sweet flesh. The season of ripening at Chico has proved to be unusually long; it commences about the middle of July. The fruits, which possess unusually good keeping qualities, are desirable for home use only.

43569. AMYGDALUS PERSICA. Bresquilla Peach. From Valencia, Spain. Presented by John Putnam, American Consul. A round, yellow clingstone of medium large size, with golden yellow flesh of firm texture. At the Plant Introduction Garden, Chico, California, where this variety matures its fruit about the first of September, it is considered promising as a canning peach. The tree is a strong, vigorous grower.





55563. AMYGDALUS PERSICA. Peach. Plants budded from a seedling grown and selected at the Plant Introduction Garden, Chico, California, from seed obtained through John R. Putnam, American Consul at Valencia, Spain. The fruits are large and yellow with a red blush. The flesh is golden yellow throughout and excellent in flavor; the pit is small. This variety, weighing on the average 9 ounces, promises to be of value as a commercial canning peach. It remains firm when cooked, retains its delicate flavor, and does not require a heavy sirup. The fruits ripen at Chico about August 20.

55564. AMYGDALUS PERSICA. Peach. Plants budded from a selected seedling. Grown at the Plant Introduction Garden at Chico, California, from seed obtained through John R. Putnam, American Consul at Valencia, Spain. The fruits are golden yellow, blushed red, with a deep basin and distinct suture. The pit is small and yellow, not coloring the flesh, which is firm and delicious. The average weight is about 5 ounces. This variety is a good shipper and may prove valuable for canning; it ripens at Chico about the middle of August.

55613. AMYGDALUS PERSICA. Peach. Originated at the Plant Introduction Garden, Chico, California. This variety, which is considered promising for its quality and productiveness, has yellow fruits with red cheeks. It is round, slightly flattened at both ends, about three inches in diameter, with a wide, shallow basin and indistinct suture. The flesh is yellow, very juicy, and of fine quality. In flavor this peach compares favorably with Late Crawford. It ripens after Elberta, and in texture is better than the latter.

55831. AMYGDALUS PERSICA. Goodman's Choice Peach. From Eastwood, New South Wales. Purchased from C. E. Vessey. This peach has created something of a sensation in Australia, where it has been reported superior to Phillips Cling, the standard canning variety of California. The originator describes it as follows: "Undoubtedly the greatest yellow-flesh, clingstone peach introduced for many years. The tree is a heavy bearer each season of medium-sized fruits that are admirable for canning. The skin has a red blush on the sunny side; the flesh is beautifully rich and translucent; this variety is remarkable for even crops and gradual ripening, which means so much when the picking campaign is in progress." Goodman's Choice merits testing in California alongside standard canning sorts.

55835. AMYDALUS PERSICA. Peach. Seedling of the variety Tardio Amerillo from Spain, grown at the Plant Introduction Garden, Chico, California. The fruits are 2-1/8 by 2-1/4 inches, weighing on the average 4 ounces; the skin is golden with a faint blush, the basin deep and narrow, the depression at the suture slight. Both flesh and pit are yellow. The season for this variety at Chico, California, is early September. This is a good canning clingstone and a heavy bearer.



55836. AMYGDALUS PERSICA. Peach. Seedling of the variety Tardio Amarillo from Spain, grown at the Plant Introduction Garden, Chico, California. The fruits are 2 by 2-1/2 inches, weighing 4 ounces on the average; the basin is deep and narrow and the suture visible only as a line; the flesh is deep yellow, of good texture and flavor; the pit is small and yellow. This peach should be tested for canning purposes.

26503. AMYGDALUS PERSICA NECTARINA. Nectarine. Original introduction from Sinkiang, China. Seeds presented by E. Coates. The fruits are large, freestone, and pale yellow with a red blush. The flesh is creamy white, red at the stone, juicy, crisp, subacid, and of very good quality. The fruit keeps well in shipment. Budded plants are available from a selected seedling.

30648. AMYGDALUS PERSICA NECTARINA. Nectarine. Original introduction from Guma, Sinkiang, China. Collected by Frank N. Meyer, Agricultural Explorer. Budded plants are available from a selected seedling. This is a medium-sized, freestone nectarine of good flavor and quality, with a red pit.

34685. AMYGDALUS PERSICA NECTARINA. Quetta Nectarine. Presented by Lieut. W. L. Maxwell, Quetta, Baluchistan. The tree is large, handsome, and unusually hardy for a nectarine, although it thrives best in regions not having severe winters. The large, round fruits, slightly over 2 inches in diameter, are green, heavily blotched with red. The greenish flesh, strongly marked with red around the pit, is juicy and of rich, tart flavor. This is an unusually good nectarine, sufficiently firm to ship well.

43139. AMYGDALUS PERSICA NECTARINA. Ansenne Nectarine. From New Zealand. Plants presented by H. R. Wright. The fruits are large, red, freestone, of splendid appearance, and excellent in flavor and quality. This variety bears freely and seems worthy of careful trial.

43140. AMYGDALUS PERSICA NECTARINA. Diamond Jubilee Nectarine. From New Zealand. Presented by H. R. Wright. This is a large, highly colored, freestone nectarine, with melting, juicy, sweet flesh of excellent flavor. At the Plant Introduction Garden, Chico, California, it has been found a poor keeper. The ripening season in that region is early August.

43141. AMYGDALUS PERSICA NECTARINA. Gold Mine Nectarine. From New Zealand. Presented by H. R. Wright. A fine, large, freestone, red and yellow nectarine about two inches in diameter. The creamy white flesh is sweet and juicy. At the Plant Introduction Garden, Chico, California, this variety ripens in late July and early August.



43142. *AMYGDALUS PERSICA NECTARINA*. Lippiatt Nectarine. From New Zealand. Presented by H. R. Wright, under the name Lippiatt's Late Orange. This is one of the finest New Zealand nectarines yet tested in the United States. The fruits are of unusually large size, beautifully colored red and orange, and the flesh is of excellent quality. The tree is fairly vigorous and productive. The season of ripening at Chico, California, is during late July and early August. Strongly recommended for trial.

43143. *AMYGDALUS PERSICA NECTARINA*. Muir Nectarine. From New Zealand. Presented by H. R. Wright, under the name Muir's Seedling. An unusually fine nectarine, worthy of careful trial. The fruits, which are of excellent quality, have juicy flesh slightly pink toward the pit. At the Plant Introduction Garden, Chico, California, the ripening season is during the latter part of July and the first half of August.

43144. *AMYGDALUS PERSICA NECTARINA*. New Boy Nectarine. From New Zealand. Presented by H. R. Wright. A nectarine of medium size, with green skin mottled with red; the flesh is red near the pit, and of fair quality. At the Plant Introduction Garden, Chico, California, this has proved to be a productive variety, ripening in late July and early August.

43146. *AMYGDALUS PERSICA NECTARINA*. Surecrop Nectarine. From New Zealand. Presented by H. R. Wright. At the Plant Introduction Garden, Chico, California, where it ripens in late July and early August, this has proved a productive variety, bearing medium-sized green fruits mottled with red. The flesh is excellent in quality and flavor. Tree vigorous and healthy.

61302. *AMYGDALUS PERSICA X PERSICA NECTARINA*. Hybrid Peach. Originated at the Plant Introduction Garden, Chico, California. J. E. Morrow, superintendent of the Garden, produced this variety by crossing the Bolivian Cling (SPI 36126) and the Quetta Nectarine (SPI 34654). The fruits are clings of attractive appearance and fine flavor. Mr. Morrow describes them as creamy yellow with red cheeks; cavity fairly deep; suture distinct; stone medium sized, red, staining the light-colored flesh which is sweet and of good quality. Considered a promising peach for table use. Ripens at Chico during the first part of August.

55030. *ANNONA DIVERSIFOLIA*. Ilama. From Chiapas, Mexico. Presented by C. A. Purpus. This tree, indigenous in the mountains and foothills of southwestern Mexico, Guatemala, and Salvador, yields one of the finest annonaceous fruits of the Tropics. It may be said, in fact, to rival the cherimoya, and it has the advantage that it can be grown successfully at low elevations, while the cherimoya only attains perfection in the Tropics when cultivated at 3000 feet or higher. Because of the heavy bloom which covers the green or reddish fruit, and which gives it a whitish cast, it is called anona blanca in Guatemala; in southwestern Chiapas it is known as papauce. The fruit is conical, oval, or round,



and weighs 8 to 24 ounces. The pulp is white or rose-tinted, similar to that of the cherimoya in texture and flavor, though usually more acidulous. The seeds are like those of the cherimoya. At the Plant Introduction Garden, Miami, Florida, this species produced its first fruits in 1923. Its behavior at that place indicates that it will be successful in southern Florida, where it should become a popular fruit. It is recommended also for trial in tropical regions generally, for it merits wide distribution.

26565. *ARALIA CORDATA*. Udo. From Japan. A spring salad vegetable, very popular in Japan, and which, when properly grown and suitably prepared for the table, is a great delicacy. The young shoots are blanched by mounding with earth or by covering with closed drain tiles in the early spring. In Nova Scotia these are available two weeks before asparagus. The shoots are sliced, chilled in ice water, and served with French dressing, or are cooked and served like asparagus. They have a delicate and delicious piney flavor if the blanching has been thorough. The plants, which continue to yield for about 9 years, are set 3 or 4 feet apart and in summer make an attractive screen of foliage 4 to 6 feet high which dies down in the fall. Udo is certain to grow in favor in this country as soon as the correct methods of culture and preparation are generally understood. Special directions will be furnished on application.

37013. *ARTABOTRYS UNCINATUS*. Ylang-ylang. From Gotha, Florida. Presented by H. Nehrling. This plant, formerly known under the name *Artabotrys odoratissimus*, is reputed to be one of the sources of the celebrated ylang-ylang perfume. It is cultivated in the warmer parts of India and elsewhere in the Asiatic tropics, and is occasionally seen in tropical American gardens. Its appearance is peculiar, for it is a climbing shrub with zigzag branches reaching to 15 or 20 feet in length. The flowers are about 2 inches broad, and of brownish-red color; their fragrance is penetrating and delightful. The hook-like flower stalks, by the aid of which the broadly egg-shaped fruits are hung or suspended to nearby trees or bushes, are as interesting as the habit of growth exhibited by this shrub. It is not sufficiently hardy for cultivation in any but practically frostless regions.

55624. *BAUHINIA HETEROPHYLLA*. From Santiago de las Vegas, Cuba. Presented by Dr. Mario Calvino, director, Estacion Experimental Agronomica. This climbing Bauhinia, known locally as *bejuco tortuga* (turtle vine) is described by Dr. Calvino as growing in low, sandy places, chiefly on the edges of lagoons and marshes in western Cuba. Its clusters of yellowish white flowers appear in December, for which reason it seems worthy of trial in southern Florida, where winter-flowering ornamentals are much desired. It may not prove sufficiently hardy for cultivation in other parts of the United States, but should succeed in the Tropics generally.





56292. *BENZOIN* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A tree reaching 35 feet in height, with a trunk about one foot thick, and leathery, aromatic, dark green and glossy leaves. From the scarlet, one-seeded fruits, borne in small clusters, is obtained a white, oily liquid used by the Chinese to make yellow wax, for burning and other purposes. For trial in the south Atlantic and Gulf coast states, and on the Pacific coast.

35599. *BLIGHIA SAPIDA*. Akee. From Kingston, Jamaica. Presented by W. Harris, superintendent of public gardens. This African tree was introduced into the West Indies at an early day, and is now fairly common in several islands. Its behavior at Miami, and elsewhere in southern Florida, has shown that it is well suited for cultivation in that region. On deep, rich soils it makes a tree 50 feet high; in southern Florida it will probably not exceed 35 feet. It has attractive, compound leaves, and curious, pendent, three-sided fruits about two inches long, which open when ripe, exposing three, black, shining seeds the size of small marbles, each having at its base a small wax-like body (the arillus) which suggests in appearance the brain of some small animal. Fried in butter, or cooked with salt fish, this arillus is excellent eating. The tree merits wider planting in southern Florida, and in tropical regions where it is not yet cultivated. It has not proved successful in any part of California, and it seems doubtful if further experiments in that state are worth undertaking.

58370. *BYRSONIMA SPICATA*. From Dominica, British West Indies. Presented by Joseph Jones, Curator, Botanic Gardens. A tree of the West Indies and northern Brazil, reaching a height of 30 to 40 feet, and bearing yellow flowers followed by small fruits of the same color, acid, and said to be good eating when ripe. The bark is a source of tannin, and is used to prepare a red dye. Suggested for trial in Florida, and those tropical regions where it is not yet cultivated.

41333. *CAESALPINIA PECTINATA*. From the Peruvian Andes. Collected by O. F. Cook, Bureau of Plant Industry, in the Urubamba valley near Ollantaytambo. A tall, upright, spiny shrub or small tree, which reaches 30 feet in height, and bears small greenish yellow flowers in cylindrical open spikes, followed by clusters of red pods. Mr. Cook suggests that, in addition to the possibility of using it for ornamental planting, this shrub, which is called *tara* in Peru, may have value as a hedge and windbreak plant for the Southwestern States. It seems likely to withstand light frosts, but not hard freezing.

56452. *CASSIA BREWSTERI*. From Brisbane, Queensland. Presented by E. W. Bick, Curator, Botanic Gardens. A shrub or small tree found on hilly pastures and river banks in northern Queensland. It reaches 30 feet in height under favorable conditions, and bears yellow flowers in axillary clusters three to six inches long; the thick pods are often a foot in length, and the pale yellow, close-grained wood is prettily marked. For trial in California, Florida and other mild-wintered regions as an ornamental plant.



59675. CASSIA DIDYMOBOTRYA. From Lucknow, India. Presented by F. H. Johnson, Government Horticultural Gardens. This is a handsome, yellow-flowered shrub or small tree, native to eastern tropical Africa. The leaves, which consist of eight to 16 pairs of narrowly oblong leaflets, are from six inches to a foot in length, while the flowers are produced in simple erect clusters a foot long. For trial in California and Florida.

54923. CASSIA NODOSA. Pink-and-white Shower. From Honolulu, Hawaii. Presented by Dr. H. L. Lyon. Much used for street and ornamental planting in Hawaii, and elsewhere in the Tropics. It is a moderate-sized, deciduous tree with long, drooping branches and glossy leaves. The bright, pink-and-white, rose-scented flowers which are borne profusely in dense clusters, appear during May and June at Honolulu. Since the plant is native to India and the Philippines, it cannot be expected to resist low temperatures. It should be tested in extreme southern Florida.

56564. CASUARINA SUBEROSA. From Hobart, Tasmania. Presented by L. A. Evans, Secretary of Agriculture. A tree 30 to 40 feet high, quite similar to the well known *C. equisetifolia* in general character. It is best distinguished from the latter by its slender branchlets. The wood is used in cabinet-making, and the foliage is considered an excellent forage in Australia. This species is said to resist drought; the amount of frost it will tolerate has not yet been determined in the United States. For trial in California and the southern States.

CHAYOTA EDULIS. Chayote. From Mexico, Central America, and the West Indies. A vigorous-growing, perennial-rooted vine, suited to the Southern States. The plant yields enormous crops of fruits that keep well and are more delicately flavored than the squash. The freedom from fiber, the fine texture, and the ease of its preparation for cooking render the chayote adaptable for use in a variety of delicious dishes. The fruits may be fried, creamed, stuffed, served in stews, baked with meats, pickled, or preserved. Special directions for growing and cooking will be forwarded on request.

21617. CHIONANTHUS RETUSA. Chinese Fringe Tree. From Shantung, China. Collected by Frank N. Meyer, Agricultural Explorer. A handsome Chinese shrub, attaining about twenty feet in height. It has oval leaves and small, white, fragrant flowers followed in autumn by masses of blue berries resembling wild grapes. It is deciduous, and is hardy as far north as Boston.

23028. CITRUS LIMONIA. Meyer lemon. From Fengtai, near Peking, China. Collected by Frank N. Meyer, Agricultural Explorer. This promising lemon, first introduced in 1908, has been distributed widely by this Office, and has shown characteristics of marked value. In the first place, it is hardier than any other lemon yet tested in this country, and bids fair to extend lemon culture into regions hitherto considered unsuited to this fruit; and in the second place, it makes an excellent pot plant for house culture in the north. In habit of growth the tree is similar to the ordinary lemon, but somewhat smaller; the fruits, which are somewhat larger and broader than the standard commercial lemons seen on American markets, are pale orange-colored. Their flesh, which is of a deeper



tint than that of ordinary lemons, is slightly less acid. As a house plant, it is of ornamental appearance, nearly ever-bearing in habit, and produces its excellent fruits abundantly.

53606. *CLEMATIS TANGUTICA OBTUSIUSCULA*. From Elstree, Herts, England. Presented by the Hon. Vicary Gibbs. A handsome, climbing shrub, native to central Asia, with sharply cut, compound leaves, and very large, solitary, nodding, white flowers which are borne on stems six inches long.

15395. *COLOCASIA ESCULENTA*. Trinidad Dasheen. From Trinidad, British West Indies. A variety of the taro which constitutes a valuable root crop for the South. The plant, related to the elephant-ear, which it resembles closely in general appearance, produces large corms and medium-sized tubers which are used like potatoes. When properly prepared and eaten hot, they have an attractive nutty flavor, suggesting roasted chestnuts. The corms and tubers, when cooked, are drier and more mealy than potatoes, and are found by chemical analysis to contain a greater percentage of protein and starch than does the potato. The young leaves make delicious greens, but when raw they are very acrid (like the Indian-turnip) and must first be parboiled with baking soda to remove the acidity. A rich loamy soil and a growing season of 7 to 8 months are required to mature a crop of dasheens. Special directions for growing and cooking will be furnished on application.

29327. *COLOCASIA ESCULENTA*. Penang Taro. From South China. This is one of the finest flavored of all known taros. Although closely related to the dasheen, the Penang taro differs from it in producing elongated rather than oval corms, with none of the oval lateral tubers which in the dasheen are an important part of the crop. The tubers of the Penang are oddly shaped, and nearly all are very small. The white flesh of the corms and tubers is traversed by numerous, delicate, purple fibers; in cooking the coloring matter is dissolved and gives a pinkish hue to the flesh. While being baked, the Penang taro gives off a distinctive aroma of which one soon becomes exceedingly fond. This taro is even drier than the Trinidad dasheen; the corms and tubers are acrid when raw. This variety is not a good keeper, but its excellence as a table food has made it a favorite with nearly all who have eaten it. The culture is the same as that of the dasheen, but a slightly longer season is required for maturity.

47147. *COLOCASIA* sp. Taro. Of uncertain origin, probably from the Orient. This taro resembles the Trinidad dasheen in its habit of developing oval corms, or lateral tubers, but differs materially from it in several important respects: (1) It is a better keeper; (2) the lateral tubers rarely send up leaf-shoots, which makes the harvesting and cleaning of the crop easier; (3) the corms and tubers are much more moist and require a curing period of six or eight weeks after harvesting before they are entirely suitable for table use; (4) the flesh remains more nearly white when cooked; and (5) the flavor is even more mild than that of the Trinidad dasheen. In unsuitable soil the corms often lose the mealy-looking character. The culture is the same as for the dasheen. Because of the necessity for a curing period, this taro is to be considered mainly as one for late winter and spring use. Since it is less dry and firm than the Trinidad dasheen, and has less tendency to darken after



cooking, it is believed that in its proper season this variety will prove very popular on the market. The lateral tubers are much better baked than boiled.

58460. *COLVILLEA RACEMOSA*. From Trinidad, British West Indies. Presented by W. G. Fresman, Director of Agriculture. A handsome, tropical tree, which attains a height of 40 to 50 feet, and has fern-like, twice-pinnate leaves up to 3 feet long. The brilliant scarlet flowers are produced in dense racemes about a foot and a half in length, arising from the axils of the upper leaves. Related to the royal poinciana, which it is said to rival in beauty. Since it is not yet commonly cultivated in tropical America, it is recommended for trial in southern Florida, Porto Rico, Cuba, the Canal Zone and elsewhere.

56301. *CORNUS CAPITATA*. Dogwood. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer, in the mountains of western China. A very handsome, deciduous or partially evergreen, flowering tree of bushy habit. As in the American flowering dogwood, the apparent petals are really large, showy, cream-white or yellow bracts 2 inches long, subtending the cluster of inconspicuous flowers. Before falling, the bracts turn ruddy. The fruit is a fleshy, strawberry-shaped, crimson head a little more than an inch wide, with yellow, sweet, and edible flesh, very popular in China where it is sold in the markets.

52677. *COTONEASTER DAMMERI RADICANS*. From China. Presented by Vilmorin-Andrieux & Company, Paris, France. A low shrub from central China, with evergreen foliage, and attractive, bright-red berries. The leaves are elliptic, about an inch long, and the flowers white, half an inch broad. The variety *radicans* differs from the typical form in being more prostrate in habit, and in having few-flowered clusters of blossoms on long stalks. This is a promising cotoneaster for ground covers and rockeries.

38760. *COTONEASTER FRIGIDA*. Presented by H. E. Huntington, Los Angeles, California. A strong-growing, large-leaved species native to the Himalayan slopes of northern India at altitudes of 7,000 to 10,000 feet. The numerous, white flowers are followed by a profusion of strikingly attractive, bright-red berries. This shrub has shown itself a desirable ornamental for mild-wintered regions and will doubtless be more extensively grown in those portions of the United States to which it is adapted. It may be propagated from seed, by layering or from cuttings.

32935. *COTONEASTER MICROPHYLLA THYMIFOLIA*. Fire Thorn. From the Himalayas of northern India. Seeds presented by Alwin Berger, La Mortola Botanic Garden, Ventimiglia, Italy. An attractive, evergreen shrub of prostrate or trailing habit, with small, ovate, dark-green leaves, small, white flowers, and red berries a quarter of an inch in diameter. Recommended as a covering for sloping banks, on which it will form dense low thickets. Hardy in England, and therefore perhaps suitable for cultivation in this country as far north as Philadelphia, and perhaps in colder regions.





56304. *COTONEASTER* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. An ornamental, prostrate shrub from the mountains of Yunnan. It has small, elliptical leaves, dark green in color, and small, red berries of attractive appearance. Not hardy in the northern parts of this country.

56305. *CUPRESSUS* sp. Cypress. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A promising cypress of rapid growth, with foliage of a bluish cast. In its native region it grows to 40 or 50 feet in height. While it may not be sufficiently hardy for cultivation in the northern part of this country, it should be tested in the Southern States and on the Pacific coast, where it seems likely to find conditions altogether congenial.

56117. *DICHOTOMANTHES TRISTANIAECARPA*. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A spreading shrub, reaching to 15 feet in height, with large clusters of red and yellow berries. Suggested for trial as an ornamental plant in the Southern States and on the Pacific Coast. It probably will not prove hardy as far north as Washington, D. C.

45990)

47146)

54983) *DIOSCOREA ALATA*. Greater Yam. Four commercial varieties (at present not separately identified) of yams of excellent quality from the West Indies. There are slight differences between them in shape or quality of tuber. They have been tested for several years in Florida and more recently in the Gulf regions of nearby states, and are shown to be suited for cultivation there in several types of deep and fairly rich loam soils. The vines are 4-angled and somewhat winged; they resemble those of S.P.I. No. 37943, but the tubers are of better quality. Yams of this class are much in demand on the market, and the commercial supply is as yet very inadequate.

46801. *DIOSCOREA ALATA*. Greater Yam. A West Indian variety of yam grown for several years near Miami, Fla. The tubers, which are white fleshed and drier than those of most varieties, are of good flavor though often rough and irregular in shape. Tubers sometimes reach a weight of 15 pounds in rich sandy loam or on well-drained muck soils.

56389. *DIOSPYROS KAKI*. Kaki or Japanese persimmon. From Yokohama, Japan. Purchased from Yokohama Nursery Co. The importance of securing desirable rootstocks for the Japanese persimmons cultivated in this country has led to the importation of this variety, which is used by the Japanese extensively. It is said to be a semiwild kaki, which bears a long, pointed fruit of little value. As a rootstock for other and better sorts, it is hoped that it may prove vigorous and long-lived. It should be tested in California and the southern States.



56832. DIOSPYROS KAKI. Kaki or Japanese Persimmon. From Tokyo, Japan. Presented by Sengo Matsuda. This variety, known at Tokyo as Tsurushi, yields fruits which are valued for drying. Its principal use, however, is said to be as a stock on which to graft other and better sorts, and it has been introduced for trial in this connection.

56833. DIOSPYROS KAKI. Kaki or Japanese Persimmon. From Tokyo, Japan. Presented by Sengo Matsuda. A variety known as Yuma, which yields sour fruits used for making pickles in Japan. It is recommended as a semiwild type employed as a stock-plant on which to graft the best cultivated sorts. It should be tested for this purpose in California and the Southern States.

56308. DIOSPYROS sp. Persimmon. From China. Collected by J. F. Rock, Agricultural Explorer. In its native home this is a tree 50 feet high, with a huge crown of attractive appearance. Its yellow fruits are the size of cherries. It should be tested in California and the Southern States as a stock-plant on which to graft cultivated varieties of Diospyros kaki.

56309. DIOSPYROS sp. Persimmon. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A tall, spreading tree from dry slopes of the Likiang Mountains, where it grows wild at elevations of about 8000 feet. The fruits are small, oval, and black. The chief interest of this species lies in its possible use as a stock plant on which to graft cultivated varieties of the Japanese persimmons.

56310. DIOSPYROS sp. Persimmon. From China. Collected by J. F. Rock, Agricultural Explorer. A large, spreading tree which bears black, sweet, edible fruits, slightly over an inch in diameter. It should be tested in California and the Gulf States as a stock-plant on which to graft cultivated varieties of Diospyros kaki.

58528. ELAEAGNUS sp. From Kansu, China. Presented by R. C. Ching. Received without description; probably a shrub of ornamental appearance, sufficiently hardy for cultivation in most parts of the United States.

54897. ERYTHRINA MONOSPERMA. From Honolulu, Hawaii. Seeds presented by Dr. H. L. Lyon. A tree 20 to 30 feet in height with spreading crown of stiff, gnarled branches, and clusters of brick-red, orange, or pale yellow flowers. The pods contain scarlet or dark-red seeds. The wood, which is soft and very light, was formerly used by the Hawaiians as floats on the outriggers of their dugout canoes. The tree is found in dry regions throughout the Hawaiian Islands; it should be tried in California, Florida, the Canal Zone and elsewhere. It cannot be expected to resist heavy frosts.



54898. *ERYTHRINA VARIEGATA*. From Honolulu, Hawaii. Presented by H. L. Lyon. A tropical tree, native to India but now cultivated in many other countries. It is quick-growing, deciduous, and bears clusters of large, bright-red flowers which appear before the leaves. The pods, 4 to 8 inches long, contain several dark-carmine seeds. Known in Hawaii as Indian coral tree, or tiger's claw. For trial in southern Florida, Porto Rico, the Canal Zone and elsewhere.
60201. *ESENBECKIA LEIOCARPA*. From Brazil. Presented by F. L. Rhodes, American Telephone and Telegraph Company, New York City. An interesting tree from the cooler parts of southeastern Brazil, where its wood is used for railway ties and general construction purposes. The straight trunk is often branchless to a considerable height above the ground, which suggests its use as pole timber. For trial along the Gulf Coast, in Florida, and the Pacific States.
58628. *EUCALYPTUS DELEGATENSIS*. From Tasmania. Presented by J. G. Lipman, Director, New Jersey Agricultural Experiment Station. This tree, originally described by Hooker under the name *E. gigantea*, is reported to attain large dimensions. It is described as erect, the branches usually short and ascending, the bark thin-fibrous, and the foliage very similar to that of *E. obliqua*. For trial in the extreme southern United States and in California.
55978. *EUGENIA DOMBEYI*. Grumichama. Presented by Bro. Mathias Newell, Hilo, Hawaii. A shapely attractive tree of rapid growth, native to Brazil. It has elliptic, glossy leaves of deep-green color, and its white flowers, which are borne in great profusion, are followed within a month by ripe fruits having the size and appearance of cherries. As is the case with numerous other *Eugenias*, these fruits are not of particularly good quality; they have a thin skin, melting flesh of subacid flavor, and one or two large seeds. They may be used for preserves. In Florida this species, which bears at four or five years from seed, has withstood temperatures as low as 26 above zero. It is suitable for cultivation in tropical regions generally.
40698. *EUONYMUS NANUS*. From Kansu, China. Collected by Frank N. Meyer, Agricultural Explorer. An evergreen spindle-tree, prostrate in habit, and sending out roots all along the stems so that it makes an excellent ground cover.
56313. *EUONYMUS* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. An ornamental tree 30 to 40 feet high, with rich-green, narrow, sharply pointed leaves and red fruits. It is native to the mountains of Yunnan at elevations of 12,000 feet, and should be tested in this country as far north as Massachusetts.



57260. *EXACUM ZEYLANICUM MACRANTHUM*. From Ceylon. Presented by the Governor, through Frank B. Noyes of Washington, D. C. An erect, slightly branched plant from the mountains of Ceylon, where it grows at elevations of about 6000 feet. The stem, over a foot in height, is abundantly supplied with leaves toward the base; above, it carries a terminal cluster of strikingly beautiful flowers. These are two inches broad, deep blue with a cluster of bright orange stamens in the center. The plant blooms in one year from seed, and is an excellent subject for greenhouse culture.

58587. *FIGUS MYSORENSIS*. From Lalbagh, Bangalore, India. Presented by G. H. Krumbiegel, Superintendent, Government Botanical Gardens. One of the numerous species of *Ficus* native to India. It occurs along the base of the Himalayas from Sikkim eastwards, and is described as a large, broadly spreading tree, with few aerial roots embracing the trunk, and ovate leathery leaves up to 8 inches long. It may prove valuable as a shade and avenue tree in southern Florida and tropical America.

54632. *FRAGARIA* sp. Strawberry. From Santiago de Chile. Presented by Salvador Izquierdo, through Wilson Popenoe, Agricultural Explorer. A variety of European origin, resembling the Marshall strawberry of this country in foliage, and in color, shape and size of fruit. The character of flesh is distinct, however; it is more meaty than that of most American strawberries. Preliminary tests at Bell, Maryland, indicate that the variety is productive and show that it has perfect flowers. It should be tried as a commercial strawberry in California, and will be of interest to breeders for use in crossing.

54976 and 55516. *FRAGARIA* sp. Strawberry. From Irapuato, Mexico. This is the variety cultivated extensively in the vicinity of Irapuato, whence its fruits are shipped to Mexico City and other large towns of the highlands. At the Plant Introduction Garden, Bell, Md., it has proved less subject to leaf spot than most North American varieties. The plant is perfect flowered, and ripens its fruit at Bell very late in the season. The large hairy calyx and meaty, white flesh indicate derivation from *Fragaria chiloensis*, though it is to be assumed that some other species has also entered into the parentage of this variety. It is not recommended for general planting, but should prove of much interest to strawberry breeders.

56909. *FRANCOA SONCHIFOLIA*. Presented by Dr. A. Robertson Proschowsky, Nice, France. A perennial, herbaceous plant reaching 3 feet in height, native to Chile. It has wavy-margined, light green or sometimes reddish leaves, and dense terminal racemes 6 inches long of lilac-colored flowers each about one inch broad. May prove hardy as far north as Washington, D. C., if given protection in winter, or it may be kept over winter in a cold frame and planted out in summer. It prefers a light, sandy soil, and needs an abundance of water during the growing season.





32704. *GARCINIA LIVINGSTONEI*. Pembe. From East Africa. Presented by Pliny W. Keys, Inhambane. A small, compact bush with stiff, very stout branchlets. The small, white flowers are followed by elliptic fruits 2 inches long, orange yellow when fully ripe. The leathery skin encloses whitish, juicy flesh and two large seeds; the flavor is acid and aromatic. At Miami, Fla., this plant has borne fruit abundantly at an early age. It is of interest principally as a possible stock for the mangosteen.

56120. *GAULTHERIA* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. An ornamental shrub 10 to 15 feet high, with long, whiplike branches reaching to the ground. The leaves are leathery and dark green, while the large, white flowers are borne in great masses all along the branches. Not certain to prove hardy in this country, north of the Carolinas. Should be tested in the Southern States and on the Pacific coast.

51407. *GUAIACUM GUATEMALENSE*. Lignum-vitae. From the city of Guatemala. Secured through H. W. Goforth, American vice-consul. A small tree, reaching about 25 feet in height, native to the hot, dry, lowland plains of eastern Guatemala. It has a gnarled and twisted trunk, slender branches, delicate leaves, and in February and March is covered with small flowers of a delicate lavender-purple hue. The extremely hard wood is used in cabinet work. In southern Florida the species has proved resistant to light frosts. It is recommended as a hedge and ornamental plant for that region. Its growth is slow, but the plants even when young are shapely and decorative in appearance.

56180. *GUILIELMA UTILIS*. Pejibaye Palm. From Limon, Costa Rica. Presented by C. P. Chittenden, manager, United Fruit Co. This remarkable palm is of ancient cultivation in Costa Rica and deserves wide dissemination in the Tropics. It is a beautiful pinnate-leaved species, with a slender trunk reaching not more than 50 feet in height. The fruits, of which as many as 5 or 6 stout racemes containing 1000 each may be produced in a single crop, are top shaped, as much as 2 inches long, yellow to deep orange, with a hard seed in the center surrounded by an abundance of firm, orange-yellow, starchy flesh. After being boiled in salted water the flesh resembles that of the chestnut in texture and flavor. Recommended for testing in Porto Rico, Hawaii, the Philippines, and elsewhere throughout the Tropics.

57211. *HAKEA NODOSA*. From Hobart, Tasmania. Presented by L. A. Evans, Secretary of Agriculture. An ornamental, Australian shrub, two to six feet high, with slender branches, short, needlelike or extremely narrow leaves crowded on the stems, and axillary clusters of very small flowers. It should succeed in the semiarid southwest, especially in southern California.



55933. *HEMEROCALLIS FORRESTII*. From Yunnan, China. Seeds collected by J. F. Rock, Agricultural Explorer. This plant, closely related to the common yellow day lily of American gardens, comes from the mountains of Yunnan, where it grows wild at elevations of about 11,000 feet. It reaches 2 feet in height; the rootstalk is thick, the leaves narrow lanceolate, and the blossoms tubular, 2 to 3 inches long, golden orange, in many-flowered corymbs. An attractive plant which flowers in early spring, and thrives on soils containing much lime.

58152. *HYDRANGEA BRETSCHNEIDERII*. From Kew Gardens, England. Presented by the Director. A stout, bushy shrub 8 to 10 feet high, with dull-green, slender, pointed leaves and flattened corymbs, 4 or 5 inches wide, of white flowers which become rosy. This hardy hydrangea, first discovered in the mountains near Peking, China, thrives best in a sunny position in good soil. Recommended as a vigorous and handsome, ornamental shrub.

24638. *ILEX CORNUTA*. Holly. From northern China. Presented by Rev. J. M. W. Farnham. This holly has spiny, dark-green, glossy leaves, and in winter is loaded with clusters of scarlet berries. While it does not make as symmetrical a crown as does the native Christmas Holly, *Ilex opaca*, its attractive foliage and bright-colored fruits render it a fine winter ornamental for the Southern and Western States.

51788. *ILEX* sp. Holly. From Sibate, Cundinamarca, Colombia. Collected by Wilson Popenoe, Agricultural Explorer. A small tree with attractive foliage and quantities of berries which are first green, then cream-colored, then red, and finally, when ripe, almost black. The foliage is light green and very glossy, and the growth compact. It may prove of value as an ornamental in the Southern States and on the Pacific coast. Young plants grown at Washington have attracted attention because of their decorative character. Worthy of trial as a pot plant for house culture.

58395. *INCARVILLEA GRANDIFLORA BREVIPES*. From Yunnan, China. Collected by J. F. Rock, Collaborator of the Bureau of Plant Industry. A stemless plant, native to elevations of 9,500 to 12,000 feet in the mountains of Yunnan, where it is the first to blossom in the spring. The dark-green, glossy leaves are lyrate and pinnately cut, while the large flowers, 2 to 3 inches broad, are deep magenta purple with yellow throats. Its hardiness is undetermined; it should be tried as far north as New York.

56409. *JUGLANS REGIA*. From China. Collected by C. A. Reed, of the Bureau of Plant Industry. While conducting a survey of the walnut-growing regions of northern China, Mr. Reed secured several lots of seed which have been grouped together under this number. They came from Hwailai, in Chihli Province, which Mr. Reed reports to lie at an elevation of 2500 feet near the northernmost limit of walnut culture in China. Plants grown from these seeds will be of interest to breeders who are working with Persian walnuts, and they should be tested for hardiness at the northern limit of walnut culture in this country.



56316. *KETELEERIA* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A handsome coniferous tree, obtained at an elevation of 11,000 feet in the mountains of Yunnan. It reaches 50 feet in height, and has light-green foliage and oblong cones. It merits trial as an ornamental tree in the south Atlantic States and on the Pacific coast; it may prove hardy in colder parts of the country, but this can not be ascertained without a trial.

59293. *KHAYA NYASICA*. From Mount Silinda, Southern Rhodesia. Presented by Dr. W. L. Thompson. In Mozambique, where it is native, this tree is known as red mahogany. It is said to be a rapid grower, though not equal to eucalyptus in this respect. The timber is very durable, and not attacked by white ants or borers. While it prefers moist soil, it can be grown in fairly dry situations. Probably it will not resist much frost. The Pacific coast and southern Florida may provide suitable conditions for it.

56317. *LIGUSTRUM IONANDRUM*. Privet. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A compact, ornamental, hedge shrub, 10 to 12 feet high, found among limestone boulders on the Likiang Snow Range at altitudes of 10,000 feet. Not hardy.

56318. *LIGUSTRUM* sp. Privet. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. This privet, from water-courses on the Likiang Snow Range at altitudes of 8,500 feet, reaches the size of a small tree. Its small, fragrant, cream-colored flowers are borne in large, compound clusters.

56824. *LIGUSTRUM* sp. Privet. From China. Collected by J. F. Rock, Agricultural Explorer. An ornamental shrub which grows among lava boulders in southwestern China, at 6,000 feet altitude. The cream-colored flowers are in large, pyramidal clusters. It is not likely to prove hardy in the colder parts of the United States.

56825. *LUCULIA* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. An ornamental shrub which reaches a maximum height of 18 feet. Its deep pink, delightfully fragrant flowers, 2 inches broad, are borne in terminal clusters of considerable size. Since this plant grows in Yunnan at elevations between 6,000 and 8,000 feet it can not be expected to prove hardy in the northern United States. It may succeed in cool, moist, nearly frost-free regions on the Pacific coast; and it should be tried elsewhere as a greenhouse plant.

30229. *MALUS SYLVESTRIS*. Helm Apple. From Colombia, Isle of Pines. Presented by Dr. F. R. Ramsdell. A variety originally from Lee County, Texas, cultivated with unusual success in the West Indies, and for this reason thought by Dr. Ramsdell worthy of dissemination in other tropical and subtropical regions where most apples do not succeed. It is a large, handsome, summer apple with red skin and tender, juicy, sweet flesh. At the Plant Introduction Garden, Chico, California, it ripens from late July to the middle of August. The tree is a vigorous, healthy grower.



35638. *MALUS SYLVESTRIS*. Apple. This variety originated at the Plant Introduction Garden, Chico, California, from seed of the Oporto apple sent by F. N. Meyer from Crimea. It shows promise of proving valuable for warm valleys where many other varieties will not succeed. It is a handsome, summer apple (ripening at Chico during the latter half of July), red, about 8 ounces in weight, with waxy skin and yellow, rather mealy flesh of good quality.

43157. *MALUS SYLVESTRIS*. Diadem Apple. From New Zealand. Plants presented by H. R. Wright. A handsome, large fruit with light-red skin and cream-white flesh of good texture and pleasing flavor. Fruits ripened at the Plant Introduction Garden, Chico, Calif., about August 30. This variety promises to be a valuable addition to the late summer apples grown in this country. It is excellent both as a dessert and as a cooking apple.

58593. *MARKHAMIA* sp. From Untali, Rhodesia, South Africa. Presented by Rev. E. H. Greely, who describes it as a native Rhodesian tree with yellow flowers 2 inches broad. It belongs to the family Bignoniaceae, and seems likely to succeed in southern Florida and California. There is no reason to believe it will resist heavy frosts.

55936. *MELIOSMA CUNEIFOLIA*. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A beautiful flowering shrub or small tree, which resembles the weeping willow in habit, and bears near the ends of its drooping branches large pyramidal clusters of fragrant flowers, first white, then turning cream colored. It grows wild in Yunnan at elevations of about 10,000 feet; it may not prove sufficiently hardy for cultivation in the northern part of this country, but should be tried in the south, and on the Pacific coast.

58410. *MIMOSA SOMNIANS*. From the State of Vera Cruz, Mexico. Presented by C. A. Purpus, Huatusco. A tropical American mimosa, somewhat shrubby in habit, armed with a few short spines, and bearing white or pinkish flowers. Considered by Dr. Purpus worthy of cultivation as an ornamental. Likely to succeed in southern Florida, and perhaps also in California.

58411. *MIMOSA* sp. From the State of Vera Cruz, Mexico. Presented by C. A. Purpus, Huatusco. This plant, not yet determined botanically, is said by Dr. Purpus to be worthy of cultivation as an ornamental. It should succeed in southern Florida, and perhaps also in California.

55735. *MYRICA RUBRA*. From Japan. Received from the Yokohama Nursery Company. An evergreen tree native to eastern Asia, called "yang mae" in China. The beautiful, dark-purple fruits average from one to one and a quarter inches in diameter and can be eaten out of hand or made into compotes and pies. There is great variation in the productivity of the trees, as well as in the size, color, and flavor of the fruits which generally taste of strawberry and lemon. For trial in the Southern states and in California.





56328. *OLEA* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A tree reaching 50 feet in height, with a trunk one foot in diameter covered with whitish bark, and having narrowly oblong, dark-green, leathery leaves and small, oval, bluish black fruits in clusters. Recommended for trial as an ornamental tree in the South Atlantic and Gulf Coast States and the mild coast regions of California.

55465. *ONCOBA ECHINATA*. Gorli Shrub. From Sierra Leone, Africa. Received from L. A. King Church, conservator of forests, Freetown. Chaulmoogric acid, used successfully in the treatment of leprosy, has been obtained commercially only from certain Asiatic trees, of which the most important are *Taraktogenos kurzii*, *Hydnocarpus anthelminthica*, and *H. wightiana*. These are all slow growing, and require many years to produce the fruits from which chaulmoogric acid is secured. In order to meet the increasing demand for this substance, a plant which requires fewer years to come into bearing is desired. *Oncoba echinata* may meet this requirement; it is described as a shrub which fruits within a few years of planting, and whose seeds contain 46.6% of fat, of which 37.5% is chaulmoogric acid, according to an analysis made at the Imperial Institute, London, by Gouling and Akers. The cultural requirements of *Oncoba* are not definitely known. It is believed the plant may succeed as far north as southern Florida. It should be tested in all tropical regions where leprosy is present. Preliminary experiments have shown that it needs an open, sandy soil, and that it does not stand transplanting well.

55992. *OSTEOMELES SCHWERINAE*. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. An ornamental, spreading shrub about 3 feet high, with pinnate leaves suggesting those of some of the Leguminosae; pinkish white, very fragrant flowers about two-thirds of an inch broad; and small, egg-shaped, dull-purple fruits, sweet and pleasant to eat. Not sufficiently hardy for cultivation in northern parts of this country, but should succeed from the Carolinas southward, and along the Gulf coast.

57730. *PANDANUS TECTORIUS*. From Honolulu, Hawaii. Presented by H. L. Lyon. One of the "screw-pines," native to the Philippine Islands and adjacent regions, where it is found along the seashore, and where it attains a height of 15 to 20 feet. The leaves are used for making mats and hats. The lower part of the ripe fruit is covered by a yellowish pulp of excellent flavor. For trial in southern Florida, Porto Rico, the Canal Zone and other tropical regions.

60356. *PASSIFLORA VITIFOLIA*. From Gatun, Canal Zone. Presented by J. A. Close. A tropical climber, native to Panama, where it is known as *sandia del monte* or wild watermelon. The plant is a vigorous grower, with handsome, red flowers which give it ornamental value. The fruit, though edible, is not of good quality. For trial in southern Florida and tropical regions.

58376. *PAULOWNIA FORTUNEI*. From Taihoku, Formosa, Japan. Presented by the Director, Forestry Experiment Station. A tree similar in general character to *Paulownia imperialis*, well known in the United States. It differs in its larger, whitish, spotted flowers, and its longer leaves. Not likely to prove hardy in the northern parts of this country.



46337. *PERSEA AMERICANA*. Gottfried Avocado, on Mexican roots. This variety, which originated at the Plant Introduction Garden, Miami, Florida, is of the Mexican race. The fruit is slender pyriform, weighing 14 to 16 ozs.; surface smooth, sometimes glossy, olive green to dull purple in color; skin of average thickness for large-sized fruits of the Mexican race, easily broken; flesh pale yellow, with a few fibers toward the stem end of the fruit, buttery, becoming very soft, flavor rich, nutty, characteristic of the Mexican race; seed not large, ovoid-elliptic in form. Season late August to the first of October at Miami, Florida.

Because of its resistance to frost; its size, which is much larger than the average of its race; and its good quality, Gottfried deserves a wide trial in those avocado-growing regions which are slightly too cold for the Guatemalan race.

55736. *PERSEA AMERICANA*. Itzamna Avocado, on West Indian roots. This variety was introduced from Guatemala in 1916, but was not propagated for distribution until several years later.

Itzamna is the best late-ripening Guatemalan avocado yet tested at the Plant Introduction Garden, Miami, Florida. The tree is a strong grower, shapely, with stiff branches. Up to the present, it has borne regularly, its behavior in this regard being more satisfactory than that of many other Guatemalan varieties. The fruit, which matures at Miami from March to early May, is slender pyriform, 14 to 18 ounces in weight, dark green and somewhat rough on the surface; flesh deep yellow, free from discoloration or fiber, smooth, very dry, and of rich nutty flavor; seed medium sized, tight in the cavity. West Indian roots are probably the best for southern Florida, but for the colder parts of the state, and for California, Mexican roots are preferable.

55736. *PERSEA AMERICANA*. Itzamna Avocado, on seedling Gottfried roots. (See above for description of this variety.) Trees budded on Gottfried roots (Mexican race) are likely to prove better adapted for cultivation in California than those on West Indian, since the latter is subject to frost injury, especially when the plants are set out in the orchard with the point of union between stock and scion an inch or two above the surface of the ground.

54767. *PHOENIX OUSELEYANA*. From Calcutta, India. Presented by Percy Lancaster, secretary, Agri-Horticultural Society of India. An armed palm with a stem 9 inches thick, reaching only 12 feet in height. The fruits are orange-colored until fully ripe when they turn black and are edible. Native to the southern slopes of the Himalayas. Preliminary tests at the Plant Introduction Garden, Bell, Md., suggest that this may prove to be an unusually good palm for house culture. It is of slow growth, and is fully characterized by the time it is three or four inches high. The pinnae are narrow, delicate, and gracefully arched; the plant seems to stand living-room conditions admirably; and it is much less exacting than *Cocos weddelliana* in regard to moisture. In California and Florida it may prove an excellent dwarf palm for garden decoration.



56276. *PHOTINIA* sp. From China. Collected by J. F. Rock, Agricultural Explorer. A tall-growing tree of the apple family, with a dense crown, found in the Kuyung Mountains at an altitude of 6,000 feet. The flowers, said to be white, are borne in large masses about 5 inches across, and succeeded later in the season by the deep orange-red fruits. It should be tried in the South Atlantic and Gulf Coast States and the mild coast regions of California as an ornamental shade tree.

56779. *PHOTINIA* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. In its native region, the mountains of Yunnan, this plant becomes a tree 30 to 40 feet high. It bears clusters of white flowers followed by orange-red, apple-like fruits. It should be tested as an ornamental tree in the South Atlantic and Gulf Coast States, and in California.

56906. *PHYLLOCARPUS SEPTENTRIONALIS*. Cardinal tree. Seed purchased from Fernando Carrero, El Barranquillo, Guatemala. A handsome flowering tree found in the dry Motagua Valley of eastern Guatemala, where it flowers in January and February. It reaches about 50 feet in height, and has small, pinnate leaves which are light green in color; these fall about the end of the year; and, before the new ones have time to make their appearance, the tree is covered with crimson-scarlet blossoms. It will probably succeed in tropical regions which have a well-marked dry season. Preliminary experiments indicate that it may be suitable for cultivation in the warmest parts of southern Florida.

40851. *PHYLLOSTACHYS BAMBUSOIDES*. Giant timber bamboo. This is one of the finest of all the bamboos and on good soil will grow to a height of 60 to 70 feet. Plants available for distribution have been propagated at the Barbour Lathrop Grove near Savannah, Georgia, where the parent plants, now about thirty-five years old, have many culms 50 feet or more in height. The giant timber bamboo is strikingly ornamental in character, and clumps of it are highly recommended for farm homes throughout the South. It forms a welcome shade in summer and a protection against cold winds in winter. Planted in blocks of one-eighth to one-half acre it will prove a source of much useful material. Well-ripened canes are always in demand for fishing poles; they may also be used for light fences, gates, trellises, tool handles, bean poles, and many purposes around the house such as towel racks, hat racks, and curtain poles. In the distribution of these plants preference will be given to those who are in position to establish and care for small groves. At least 20 plants are required for a start. These, if carefully handled, will give planting material for a grove of one-quarter to one-half acre in two or three years.

56332. *PIERIS* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A white-flowered shrub, native to the mountains of Yunnan at an altitude of about 11,000 feet. It should be tested as an ornamental in the South Atlantic and Gulf States, and on the Pacific coast.



21970. *PISTACIA CHINENSIS*. Chinese Pistache. From Shantung, China. A very promising shade tree for those sections of the United States where the summers are warm and the winters only moderately cold. The young leaves are carmine-red, and the autumn foliage gorgeous scarlet and yellow. The wood, which is decidedly heavy and not often attacked by insects, is used in the manufacture of furniture. From the seeds an oil is obtained which is used for illuminating purposes. The young, partly opened, foliage buds, boiled like spinach, are sometimes eaten by the Chinese.

56826. *PITTOSPORUM* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A handsome tree, 30 to 40 feet high, symmetrical in form, with attractive foliage and cream-colored flowers borne in large panicles. Recommended for trial as an ornamental plant in the South Atlantic and Gulf Coast States, and the mild coast region of California.

55920. *PLOCAMA PENDULA*. From the Canary Islands. Collected by David Fairchild, Agricultural Explorer. A low-growing shrub which reaches about 3 feet in height, and is of graceful weeping habit, suggesting a miniature weeping willow. It is drought-resistant, and suitable for cultivation in southern California. It will not survive hard frosts.

51877. *POPULUS MAXIMOWICZII*. Poplar. Presented by John Dunbar, assistant superintendent of parks, Rochester, N. Y. A handsome, stately poplar said to reach large size in its native country, Manchuria. In the United States, it is one of the few large, deciduous, exotic trees which can be recommended for general planting in extremely cold sections. Mr. Dunbar, who has grown it for years and who has been instrumental in effecting its dissemination in this country, says that it is successful on dry gravelly soil where Norway spruce and white ash are failures. During the first eight years it increases in height at the rate of 4 to 5 feet annually. Its foliage is of striking appearance; unlike that of many poplars, it hangs on until late in the season. The specimens grown in this country have shown remarkable freedom from pests and diseases. Unless all indications fail, *Populus maximowiczii* will become an important shade and windbreak tree in the northernmost parts of the United States.

58398. *PRIMULA BULLEYANA*. Primrose. From Yunnan, China. Collected by J. F. Rock, Collaborator of the Bureau of Plant Industry. A moisture-loving primrose, probably adapted to cultivation in the United States. The leaves are thin, and the flower scape, about 2 feet high, bears superposed umbels of reddish orange, faintly fragrant blossoms, each about an inch broad.

56334. *PRIMULA FORRESTII*. Primrose. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A beautiful plant, with glandular fragrant foliage, in its native home producing rootstocks 2 to 3 feet in length; extremely long lived. The scape is stout and erect, 3 to 9 inches high, bearing a 10 to 25-flowered umbel. Individually the blossoms are nearly an inch broad, orange yellow in color, and fragrant. Should be tested in rock gardens, on well drained, limestone soil.





58399. PRIMULA POISSONI. Primrose. From Yunnan, China. Collected by J. F. Rock, Collaborator of the Bureau of Plant Industry. A tall primrose, with leaves 3 inches long, not aromatic. The flower scape reaches 3 or 4 feet in height and bears superposed umbels of crimson blossoms. It remains in bloom a long time and is considered a promising species, somewhat similar to Primula japonica in general appearance. It has not proved hardy in France.

38282. PRUNUS ANSU. Apricot Plum. From near Taianfu, Shantung Province, China. Collected by Frank N. Meyer, Agricultural Explorer. A rare fruit, not yet tested widely in the United States. At the Plant Introduction Garden, Chico, Calif., where it has recently come into bearing, the fruits have been found highly attractive in appearance and of good quality, suggesting red apricots. The flowers, which are produced in early March at Chico, are white in color, and resemble those of the apricot. The tree is not of vigorous growth.

20072. PRUNUS ARMENIACA. Apricot. From Manchuria. Collected by Frank N. Meyer, Agricultural Explorer. A handsome apricot, which at Chico, Calif. has ripened earlier than Blenheim and has shown unusual promise. The fruits are large, red, freestone, and of excellent quality. It has not yet produced many crops, so that little can be said of its bearing habits.

32833. PRUNUS ARMENIACA. Bairam-Ali Apricot. From Merv, Turkestan. Collected by Frank N. Meyer, Agricultural Explorer. A large, light-yellow, freestone apricot, in weight averaging about ten to the pound. The flesh is juicy, sweet, and of excellent quality. At the Plant Introduction Garden, Chico, Calif., where this variety ripens its fruits in early June, the tree has proved to be large, strong and vigorous in growth.

32834. PRUNUS ARMENIACA. Murgab Apricot. From Merv, Turkestan. Collected by Frank N. Meyer, Agricultural Explorer. A large, light-yellow, freestone apricot, with sweet, juicy flesh of good quality, and a medium-sized pit. Tree large and vigorous, of good habit and healthy. At the Plant Introduction Garden, Chico, Calif., the fruits ripen about the middle of June.

34265. PRUNUS ARMENIACA. Apricot. From Rome, Italy. Presented by Gustavus Eisen. A variety said to be a favorite in the vicinity of Frascati, in the Alban Hills near Rome. The fruits, which average nine to ten per pound, are large, elongated, and yellow. They have a deep, narrow, stem-cavity, and a rather deep suture, dividing them into unequal halves; the pit is large and free from the flesh which is of decidedly good flavor. The fruits ship well and are valued for drying. Tree very large, healthy and productive. At the Plant Introduction Garden, Chico, Calif., the ripening season is about the middle of June.



34269. PRUNUS ARMENTIACA. Crisomelo Apricot. From Boscotrecase, Italy. Presented by Gustavus Eisen. At the Plant Introduction Garden, Chico, Calif., where it ripens about the middle of June, this freestone apricot shows promise as a variety suitable for canning, shipping, or drying. The fruits are yellow, blotched red, with yellow flesh of very good quality. Tree of average vigor.

34270. PRUNUS ARMENTIACA. Apricot. From Rome, Italy. Presented by Gustavus Eisen. Introduced as a form of the Crisomelo apricot. At Chico, Calif., the fruit is reddish yellow, with firm flesh clinging slightly to the pit when not fully ripe. It is one week later than Blenheim in ripening, and is thought promising as a shipping and canning variety.

33223. PRUNUS AVIUM. Garrafal le Grand Cherry. From Granada, Spain. Purchased from Pedro Giraud. This is one of the sweet cherries, probably of French origin. It is said to be large-fruited, and worthy of trial in the western United States where this species succeeds.

40223. PRUNUS BOKHARIENSIS. Plum. From Saharanpur, India. Presented by A. C. Hartless, superintendent, Government Botanic Garden. A plum cultivated in northern India, interesting but too small-fruited for commercial use in the United States. Its principle value in this country seems likely to be for the production of rootstocks on which to graft other varieties. The tree, which resists drought and is very attractive when in bloom, is of vigorous growth, with dense foliage which strongly resembles that of the myrobalan. The red fruits, scarcely an inch long, are pleasantly flavored and suitable for home use. At the Plant Introduction Garden, Chico, Calif., they mature in the latter part of July.

40224. PRUNUS BOKHARIENSIS. Plum. From Saharanpur, India. Presented by A. C. Hartless, superintendent, Government Botanic Garden. Similar in general character to the preceding (SPI 40223) but a month earlier in ripening. The fruits, which weigh about 18 to the pound, have golden yellow flesh of pleasant flavor. Mr. Hartless suggests that the alubukharas, as these plums are termed in northern India, may prove better suited to tropical and subtropical conditions than most others.

40229. PRUNUS BOKHARIENSIS. Plum. From Saharanpur, India. Presented by A. C. Hartless, superintendent, Government Botanic Garden. A small plum of myrobalan type, dark purple in color, with golden flesh of good texture. The tree, which is fairly vigorous, and always healthy, matures its fruits at Chico, Calif., in early July. Similar to the two preceding numbers, and like them, of interest as a stock-plant on which to graft other varieties, and for cultivation in subtropical regions where other plums do not succeed.



40231. PRUNUS BOKHARIENSIS. Plum. From Saharanpur, India. Presented by A. C. Hartless, superintendent, Government Botanic Garden. This variety ripens at Chico, Calif., in late June. The fruits are red, weighing about 13 per pound, rather pointed, with rich, juicy and melting flesh, clinging to the large seed. Similar to the varieties of this species described above, in usefulness and general characteristics.

40498. PRUNUS DOMESTICA. Papagone Prune. From Naples, Italy. Presented by Gustavus Eisen. This variety, which closely resembles the Silver prune, seems promising for shipping, canning and drying. Its greenish yellow, oval fruit is more than 2 inches long, and slightly bottle-necked. The pit is long, narrow, and rough, free from the coarse, sweet flesh. At the Plant Introduction Garden, Chico, Calif., where Papagone has received preliminary trial, it matures its fruits in the latter part of July and early August.

38337. PRUNUS GLANDULOSA. From Shantung, China. Collected by Frank N. Meyer, Agricultural Explorer. This species is one of the common "flowering almonds" of American gardens. Under this number Meyer forwarded three distinct forms, - one with pure white flowers, another with rosy flowers, and the third with white flowers dotted with red. These he recommended as varieties rare in China, and worthy of introduction into the United States.

55417. PRUNUS MAJESTICA. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A tree reaching 25 to 30 feet in height, found on exposed dry ridges in Yunnan at elevations of 6,000 feet or higher. The fruit is of no value, but the tree is said to be handsome when in flower. Not suitable for cold climates.

43176. PRUNUS SALICINA. Alpha Plum. From New Zealand. Presented by H. R. Wright. A round, reddish fruit weighing slightly more than one ounce, with thick, yellow, juicy flesh, and a small, round pit. The tree has been tested at the Plant Introduction Garden, Chico, California, and has shown itself a vigorous grower. The variety belongs to the Japanese group of plums.

43179. PRUNUS SALICINA. Wright's Early Plum. From New Zealand. Presented by H. R. Wright, Avondale, Auckland. Said to be a seedling of the Burbank plum, which it greatly resembles in general characteristics. At the Plant Introduction Garden, Chico, Calif., the tree is medium sized and rather spreading in habit. The fruits are somewhat small, yellowish red in color, firm and of good flavor. They promise to be satisfactory for home use.

43180. PRUNUS SALICINA. Wright's Early Plum. From New Zealand. Presented by H. R. Wright. A very attractive, red-skinned plum of medium size, belonging to the Japanese group. In weight the fruits average about an ounce; the flesh is yellow and of pleasing flavor. Tree rather inclined to be small and spreading; leaves very broad. At Chico, Calif., this variety ripens in late June.



43181. PRUNUS SALICINA. Wright's Purple Plum. From New Zealand. Presented by H. R. Wright. The fruits of this Japanese plum are 1-1/2 by 1-1/4 inches and heart-shaped; the stem is fairly stout and short, the basin small, the suture barely discernible, and the pit small. The flesh is firm and of good flavor, almost brown in color. Tree rather small; leaves very broad. At the Plant Introduction Garden, Chico, Calif., the ripening season is late June.

43182. PRUNUS SALICINA X Cerasifera. Best's Hybrid Plum. From New Zealand. Presented by H. R. Wright. A productive, vigorous variety, with dark green, dense foliage, and heart-shaped, greenish yellow fruits of medium size. Flesh yellow, juicy, and of fine flavor. Of possible value for shipping and canning.

32670. PRUNUS SPINOSA X DOMESTICA. Hybrid Plum. From Kozlov, Russia. Presented by the originator, L. V. Mijurin. A hybrid between the Reine Claude and the sloe (*P. spinosa*). It has small, flattened, dark purplish, clingstone fruits with a touch of green. The taste is slightly astringent, resembling that of the damson. It is of good keeping quality and suitable for jams. Reported reasonably hardy in North Dakota.

32671. PRUNUS SPINOSA X DOMESTICA. Hybrid Plum. From Kozlov, Russia. Presented by the originator, L. V. Mijurin. A hybrid between the Reine Claude and the sloe (See S.P.I. 32670). The fruits, which are of medium size and dark purple color, have a sweet flavor with a distinctive after-taste. They are inclined to be astringent. A productive tree, worthy of trial particularly in cold regions.

36086. PRUNUS TOMENTOSA. Bush Cherry. From Tientsin, China. Collected by Frank N. Meyer, Agricultural Explorer. In recent years this species has attracted attention in the United States as a promising fruit-bearing shrub for home gardens. It is adapted to more arid conditions and has proved more hardy than the cultivated sweet and sour cherries of this country. Its foliage is resistant to leaf diseases, and the fruit, eaten out of hand, has the taste of the true cherry; it can be used like the latter for stewing, for pies, and for jellies and jams. The plant, which is native to Asia from Manchuria to Kashmir, makes a compact bush of attractive appearance. Its small white flowers, produced in very early spring, are very attractive. Seedlings of this species should be watched carefully when they come into fruit (which they do when three years old), and the best selected for vegetative propagation.

55941. PRUNUS sp. Plum. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A small tree found along streams on the Likiang Plain at altitudes of 9,500 to 10,000 feet. The round, lemon-yellow fruits are about an inch in diameter. The tree is a prolific bearer and grows on alkaline soil. It may not prove hardy in northern parts of this country.





53040. PRUNUS sp. From Yunnan, China. Collected by J. F. Rock, Collaborator of the Bureau of Plant Industry. A white-flowered tree reaching 25 feet in height, native to the mountains of Yunnan at elevations of about 13,000 feet. The oblong, red fruits are edible, but not of much value. Interesting for trial as an ornamental plant and for the use of breeders. The elevation from which it comes indicates that it may prove hardy as far north as Boston.

8646. PUNICA GRANATUM. Pomegranate. From Arabia. Collected by Barbour Lathrop and David Fairchild of this Department. A large and beautiful variety with rosy, thick skin and large, pink, juicy, sweet pulp; the flavor is pleasant and refreshing.

12566. PUNICA GRANATUM. Pomegranate. From Tunis. Cuttings collected by T. H. Kearney, Agricultural Explorer, on the premises of M. Robert, of Kalaa Srira. This is a large variety with moderately thick skin, pale pink and buff in color, the grains of pulp large, rose-red, juicy and sweet, the flavor pleasant but not pronounced, and the seeds soft.

13293. PUNICA GRANATUM. Pomegranate. An excellent and very productive variety, with large, bright red, thin-skinned fruits containing small, bright-red grains of pulp having an acid, vinous flavor.

27049. PUNICA GRANATUM. Krylezy-Kabuk Pomegranate. Cuttings of a Russian variety collected by Frank N. Meyer, Agricultural Explorer, near Sukhum-Kale, Caucasus. The fruit is of medium size and shows little tendency to crack; the skin is fairly thick and uniformly deep red; the core is medium-sized, the grains deep-red; the juicy, slightly acid pulp has a rich and vinous flavor. This pomegranate resembles the variety "Wonderful" and is a good shipper.

27055. PUNICA GRANATUM. Pomegranate. From Russia. Cuttings collected by Frank N. Meyer, Agricultural Explorer. A variety called Elisavetpolsky Sladkyi, obtained from the vicinity of Elizabetopol. The fruits are large with deep-red pulp of sharp, acid flavor. The tree is large and thrifty but the fruits split badly.

27961. PUNICA GRANATUM. Pomegranate. From Russia. Cuttings collected by Frank N. Meyer, Agricultural Explorer. A variety obtained from the neighborhood of Elizabetopol, Russian Caucasus (which is famous for its pomegranates). The fruits are large, sometimes 5 inches in diameter, with bright-red skin; the deep-red flesh is sour-sweet and pleasant, suggesting currants. The skin does not split readily.

30615. PUNICA GRANATUM. Pomegranate. Cuttings presented by Miss Ida Munro, Putnam, Georgia. This thrifty, prolific variety bears medium-sized fruits. The skin is thin and cream-colored, dotted with light red, and free from splitting tendencies. The small core is surrounded by bright rose-colored, sweet, juicy pulp.



30619. *PUNICA GRANATUM*. Pomegranate. Propagated from a bush which formerly grew at the east entrance of the Smithsonian Institution, Washington, D. C. This was an ornamental shrub with dark, handsome foliage and very showy flowers. It is recommended for planting as a hedge plant, the fruit being of no value.

33227. *PUNICA GRANATUM*. Negro Monstruoso Pomegranate. From Spain. Cuttings obtained by Walter T. Swingle in the neighborhood of Granada. This is one of the principal varieties grown in that region and belongs to the "Spanish sweet" type. The fruits are large and of a brilliant red color, with light-red, juicy and abundant pulp of a delicious flavor, containing soft, edible seeds. This variety has proved very successful in the pomegranate-growing regions of California.

33229. *PUNICA GRANATUM*. Rogises Pomegranate. Received from Pedro Giraud, Granada, Spain. Like S.P.I. 33227, this variety belongs to the "Spanish sweet" type. It has a thin skin, light colored on the surface; the grains of pulp are large, very sweet, and the seeds soft.

40736. *PYRACANTHA CRENULATA KANSUENSIS*. From Kansu Province, China. Collected by Frank N. Meyer, Agricultural Explorer. A small shrub, with fine foliage and orange-colored berries of attractive appearance. It grows on stony mountainsides in China, and is recommended for those parts of the United States where the winters are mild.

54991. *PYRACANTHA CRENULATA YUNNANENSIS*. Fire-thorn. Secured through Vilmorin, Andrieux and Co., of Paris, France. A handsome ornamental shrub or small tree, native to the mountains of southwestern China. It has bright-green leaves and bears in fall and winter a multitude of red berries. The variety yunnanensis differs from the typical P. crenulata in being more vigorous, and in having much longer spines and less dentate leaves. The fruits are smaller but are brighter colored and more abundant.

38263. *PYRUS CHINENSIS*. Pan-li Pear. From Honan, China. Collected by Frank N. Meyer, Agricultural Explorer. This is a very vigorous, hardy tree, yielding large, pyriform fruits, greenish yellow in color, with granular, juicy flesh of fair quality. At Chico, Calif., the ripening season is early August.

30352. *PYRUS SEROTINA*. Nanshi'pt Pear. From Karawag, Sinkiang, China. Collected by Frank N. Meyer, Agricultural Explorer. This hardy, Chinese pear appears to be blight resistant, and its fruits are recommended for canning. The tree is strong and vigorous in growth with large leaves; the fruits are oval, medium sized and smooth-skinned, with somewhat watery, fairly sweet flesh of good texture.

56352. *QUERCUS* sp. Oak. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A tree, 70 to 80 feet in height with a trunk 3 to 4 feet in diameter, found on sandy soil at elevations of 7,000 to 8,000 feet. The numerous acorns are borne in dense spikes 5 or 6 inches long. For trial as an ornamental tree in the South Atlantic and Gulf Coast States.



56354. QUERCUS sp. Oak. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A tall tree, 70 to 80 feet high, with a straight trunk 3 to 4 feet thick. The acorns are inclosed in conical involucre, and are borne in stout, densely packed spikes. The tree, which occurs in Yunnan at elevations of 7,000 to 8,000 feet, should be tested as an ornamental in the South Atlantic and Gulf Coast States and the mild coast regions of California.

50519. RHUS POTANINI. Sumach. From Honan, China. Collected by Joseph Hers and presented by Prof. C. S. Sargent, Director of the Arnold Arboretum, Jamaica Plain, Mass. A handsome shrub or small tree, reaching about 25 feet in height, remarkable for the brilliant autumn coloring of its pinnate foliage. It has proved hardy as far north as Massachusetts.

44426. ROSA ODORATA. Rose. From Pautingfu, Chihli Province, China. Collected by Frank N. Meyer, Agricultural Explorer. A remarkably vigorous rose with small, double white flowers having pink centers. Although attractive as an ornamental plant, it is useful principally as a stock on which to graft or bud other varieties. It is not entirely hardy in the northern parts of this country, but in those regions it may be used as a stock for roses under glass. Amateur rose-growers elsewhere will find it an easily grown and practically universal stock for propagating variety collections.

46002. ROSA sp. Rose. From Hupeh, China. Collected by Frank N. Meyer, Agricultural Explorer. A shrubby rose which sends up many stems. It has small foliage and bears single, medium-sized flowers of soft pink. It thrives in stiff, clay soil, resisting great humidity and high temperatures. This species was obtained from the gardens of a Roman Catholic convent at Ichang. It has shown promise as a stock, and is well worthy of trial for this purpose.

56017. ROSA sp. Rose. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A scrambling shrub or climber, 25 feet high with a spread of 30 feet or more. The flowers, which are about an inch and a half across, when first open are yellow, and later become cream-colored. The orange-red fruits are borne in large, ample, compound clusters. Tender; will not withstand severe frost.

57226. RUBUS MACRAEI. Akala. From Hilo, Hawaii. Presented by L. W. Bryan, Hawaiian Sugar Planters Association. A remarkable wild rubus from the Hawaiian Islands, interesting to plant breeders but probably not suitable for outdoor cultivation in this country, unless it may be in some of the moist, nearly frost-free spots along the California coast. The plant forms a large bush, with the older branches thornless. The fruits, which are borne at the drooping tips of the branchlets, are about 2 inches in diameter, and exceedingly juicy; the seeds are comparatively small. The flesh is slightly bitter, but otherwise delicious. Preliminary tests at the Plant Introduction Garden, Bell, Md., show that the plant is difficult to handle under greenhouse conditions; it requires an acid soil, and an abundance of shade and moisture. The variety represented by this number has red fruits.



57227. *RUBUS MACRAEI*. Akala. From Hilo, Hawaii. Presented by L. W. Bryan, Hawaiian Sugar Planters Association. Identical with S.P.I. 57226, except in the color of its fruits, which are yellow in place of red.

55630. *RUBUS* sp. Bramble. From China. Presented by F. A. McClure, Canton Christian College. An edible wild berry found in sandy soil near sea level, on the Island of Hainan. It is introduced for the use of plant breeders.

55826. *RUBUS* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A vigorous rambling shrub, native to the mountains of Yunnan where it is found at altitudes of about 12,000 feet. It has red, spiny stems, leaves with white lower surfaces, pinkish purple flowers, and small, dark red fruits of sweet and delicious flavor. It should be of interest to plant breeders, but is not recommended for general planting in this country.

57078. *SABINEA CARINALIS*. From Dominica, British West Indies. Seeds presented by Joseph Jones, curator, Botanic Gardens. One of the most brilliant flowering shrubs of tropical America. It has been tested in southern Florida, where it succeeds on dry, sandy land. Apparently it will not thrive where moisture is abundant. It has small, pinnate leaves, light green in color and deciduous for a short period. The large, scarlet flowers, in clusters of 3 to 5, make their appearance during the time the plant is devoid of foliage, and form a mass of color which is striking. *Sabinea* deserves to be grown in all tropical regions with severe dry seasons. It probably will not stand sufficient frost to permit its cultivation in California.

56829. *SCHIMA* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A promising ornamental tree for the Gulf coast and California. According to Mr. Rock, it reaches 30 or 40 feet in height; the leaves are pale green above and whitish below, the two shades contrasting prettily when the foliage is blown by the wind. The flowers, which resemble single Camellias, are an inch and a half broad, creamy white, and pleasantly fragrant. In the greenhouses at the Plant Introduction Garden, Bell, Md., seedlings one year old, and not over a foot in height, have come into bloom.

54694. *SOILYA HETEROPHYLLA*. Presented by Dr. A. Robertson Proschowsky, Nice, France. A handsome, Australian, climbing shrub somewhat resembling bittersweet. It is of rapid growth and bears a profusion of bell-shaped, lilac or purple flowers. Easily propagated from cuttings. Deserves trial in California and Florida; it is not likely to tolerate hard freezing.





58467. SPATHODEA NILOTICA. From Entebbe, Uganda. Presented by the Chief Forestry Officer. Described as a bushy tree reaching about 20 feet in height with scarlet flowers produced in short, compact, terminal clusters. The success which has attended the introduction of S. campanulata into southern Florida suggests the desirability of testing S. nilotica, which hails from the upper Nile Valley, in the same region. It seems likely to prove a valuable addition to the list of ornamental trees which flower during winter and early spring. There seems no reason for expecting that it will tolerate much frost.

59356. SPONTOGONA SALICIFOLIA. From San Manuel, Oriente, Cuba. Presented by Dr. Mario Calvino. A handsome, evergreen, tropical tree, native to eastern Cuba where it is called cuya and jocuma blanca. It is drought resistant, thrives in calcareous soils, and is a rapid grower. For trial as an ornamental tree in southern Florida, Hawaii, and other tropical regions.

52379. STACHYS SIEBOLDI. Chinese Artichoke. Received from Vilmorin-Andrieux & Co., Paris, France. A perennial herbaceous Chinese vegetable of which the tubers are eaten like potatoes. This dish has become very popular in France since its introduction there; it is served in the best restaurants and commands a high price. Prepared by the French method, the tubers are cooked for 12 or 15 minutes (if boiled longer they become watery) and are served with sauces like broad beans; they may be fried or cooked in a variety of ways, or can be used in salads. They make excellent pickles in company with onions, peppers, gherkins, etc. The tubers are small and numerous and look like a lot of closely strung beads. The plant is hardy and is propagated by the tubers. These are set out in rows in a rich, loamy, clay soil very early in spring, about potato-planting time. They are covered to the depth of 6 or 8 inches in hills 16 inches apart. The ground should not be stirred after the first of October, so as not to disturb the forming tubers which may be dug in November and should be stored in dry soil at a uniform temperature with protection from the air to prevent discoloration.

58020. STRYCHNOS GILLETII. From Kisantu, Belgian Congo. Presented by Father J. Gillet. A spiny shrub closely related to the Kafir orange (S. spinosa), native to the Belgian Congo. The shining, leathery leaves are oblong oval, and the round fruit, about 2 inches diameter, can be eaten. The plant is of slow growth, and is suitable for cultivation in botanic gardens and plant collections in southern Florida, the West Indies, and the Tropics generally.

58032. STRYCHNOS SUBEROSA. From Kisantu, Belgian Congo. Presented by Father Gillet. This is a spiny shrub or small tree, similar in appearance to S. gilletii. It has dull-green, leathery, oval leaves, and yields an edible fruit. Since strychnine occurs in the seeds of several members of this genus, they should be handled with care. The pulp surrounding the seeds is usually harmless; this is true even of the species from which strychnine is obtained commercially. It seems probable that S. suberosa will not resist heavy frosts. It should therefore be tested in southern Florida, and in tropical America generally.

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43217. *SYZYGium CUMINI*. Jambolan. From Manila, Philippine Islands. Presented by the Director of Agriculture. This handsome tree, a native of Asia, has long, slender leaves somewhat resembling those of certain eucalypts. Its small, black fruits, produced in clusters, are acidulous in flavor, suggesting sweet cherries. There is wide variation in the quality of fruit produced by different trees; that of some is large (an inch long), sweet, and pleasant, while that of others is smaller, and almost bitter. The tree is sufficiently hardy for cultivation in southern Florida and the milder parts of California.

59687. *TERMINALIA MUELLERI*. From Lucknow, India. Presented by F. H. Johnson, Government Horticultural Gardens. An Australian tree, with broadly ovate, obtuse, rather leathery leaves 3 to 4 inches long. The small, whitish flowers are in loose spikes, and the ovoid drupes are acid to the taste. The behavior of other *Terminalias* in southern Florida suggests this species as of possible value for street and ornamental planting in that state. It should be tested in California also.

59317. *TINNEA AETHIOPICA*. From Soledad, Cienfuegos, Cuba. Presented by Robert M. Grey, through David Fairchild. A much branched shrub, native to tropical Africa, with oblong leaves and dark purplish brown flowers appearing in the leaf whorls. Recommended for trial as an ornamental plant in southern Florida.

59304. *TRICHOSTIGMA OCTANDRA*. From Soledad, Cienfuegos, Cuba. Presented by Robert M. Grey, through David Fairchild. A Cuban tree, known as "juaniqui". Its twigs are used, like those of the osier willow, for the manufacture of baskets. For trial in southern Florida.

57092. *TRIPLARIS CUMINGIANA*. From Balboa Heights, Canal Zone. Presented by Holger Johansen, agronomist. A small tree, native to Panama, pyramidal in habit and found usually in moist situations, such as the borders of lakes and streams. The bracts which surround the fruit-capsules are brilliant red, and give the plant a highly ornamental appearance. Mr. Johansen recommends the species as worthy of distribution throughout the Tropics. It probably will not resist frost.

58427. *TROLLIUS* sp. From Yunnan, China. Collected by J. F. Rock, Collaborator of the Bureau of Plant Industry. A showy plant about 2 feet high, with basal leaves and deep golden yellow flowers about two inches broad. Since it comes from alpine meadows in Yunnan, it will probably require peaty soil with plenty of moisture; the elevation at which it was found, 12,000 feet, indicates that it may be sufficiently hardy for cultivation as far north as New York.

22975. *ULMUS PUMILA*. Chinese Elm. From Peking. Collected by Frank N. Meyer. This tree, originally introduced some years ago, is becoming widely established in this country and is proving an acquisition of great value. Its resistance to drought, alkali, and extremes of temperature render it suitable for cultivation in the Great Plains region where desirable shade trees are few; in the semiarid West and Southwest; and



in fact, throughout most of the continental United States. It is of rapid growth and symmetrical form, with slender, almost wiry branches, and elliptic leaves much smaller than those of the American elm.

Ulmus pumila is highly recommended as a windbreak, shade and ornamental tree for regions unsuited to most other species commonly cultivated in the United States for these purposes.

50588. ULMUS PUMILA. Chinese Elm. Presented by the Forestry Department, Ministry of Agriculture, Peking, China.

55949. VACCINIUM sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A diminutive shrub, 2 feet high, with handsome pink flowers and edible purple fruits the size of large peas. Seedlings a year old, in two-inch pots, have borne fruit at the Plant Introduction Garden, Bell, Md. They need an acid soil and may not prove hardy outdoors in the northern parts of this country.

47575. VERONICA ELLIPTICA. From New Zealand. Presented by James W. Poynton. A much-branched shrub or small tree, 5 to 20 feet in height, with pale-green, leathery leaves edged with white pubescence. The flowers, which are larger than those of other shrubby veronicas (though less than an inch broad), are blue at first, then white, and are sweet scented. Should be tried in California.

57860. VERONICA HULKEANA. From Nice, France. Presented by Dr. A. Robertson Proschowsky. One of the shrubby New Zealand veronicas, somewhat loose and straggling in habit, and reaching to 5 or 6 feet in height. The leaves are wedge-shaped, 1 to 2 inches long, glossy green; flowers small, lavender or lilac in color, in panicles sometimes a foot in length. In England, where it is too tender for outdoor cultivation except in the mildest-wintered regions, it is recommended as a species of remarkable beauty and distinction. Should be tested in the Southern States and on the Pacific coast.

22684. ZIZIPHUS JUJUBA. Ma shing hong jujube. From Tsintse, Shansi, China. Scions collected by Frank N. Meyer, Agricultural Explorer. The fruits of this variety are ellipsoid, somewhat flattened at the end, and of large size, sometimes as much as 1-3/4 inches broad. The stone is medium to large, and sharply pointed. Sometimes the bony portion of the stone does not harden, thus giving rise to what are termed seedless fruits. While trees of this variety do not bear as heavily as do those of some other sorts, the fruits have a high sugar content. An excellent jujube with shapely fruits which process well.

22686. ZIZIPHUS JUJUBA. Lang jujube. From Tsintse, Shansi, China. Scions secured by Frank N. Meyer, Agricultural Explorer. The fruits are obovoid to pear-shaped, sometimes oblique, of large size, often as much as an inch and a half in greatest diameter. The stone is ellipsoid, medium-sized, tapering to one end which terminates in a sharp spine. This variety is a heavy bearer and the fruits have a high sugar content. Undoubtedly it is one of the best sorts yet tested in the United States.



38245. ZIZIPHUS JUJUBA. Sui men jujube. From Paihsiangchen. Shansi, China. Scions secured by Frank N. Meyer, Agricultural Explorer. The fruits of this variety are ellipsoid, medium-sized, and up to 1-3/4 inches in length by one half inch in thickness. The stone is medium-sized, tapering toward one end and terminating in a sharp point. The variety is an excellent one for general purposes and processes well.

38249. ZIZIPHUS JUJUBA. Li jujube. From Fuma, Shansi, China. Scions collected by Frank N. Meyer, Agricultural Explorer. This is the largest variety yet introduced into this country and is somewhat later in ripening than most others. The fruits are round to ovoid and 1-1/4 to 2 inches long. The stone is rather large, ovoid, tapering toward one end with a sharp point. An excellent sort and highly recommended.

45638. ZIZIPHUS MAURITIANA. Indian jujube. From India and southern China. Presented by G. Regnard from plants grown in Port Louis, Mauritius Island, Africa. This moderate-sized tree is cultivated in villages of western India and is wild in the forests of the Punjab and United Provinces. The leaves are dark green above, woolly below; the spines, if present, are short. The flowers are borne in several-flowered, axillary cymes similar to those of Z. jujuba except that the flower stalk and calyx are abundantly soft-hairy. The fruit is spherical and generally one inch in diameter with a stone larger in proportion to the flesh than in the Chinese jujubes. The fruits are generally quite acid, though by cultivation they are much improved both in size and flavor. The ripe fruits are excellent when stewed and when unripe they may be pickled. The pulp is dried, mixed with salt and tamarinds to form a condiment, or is made into chutnies. The leaves constitute a valuable forage and the bark yields tannic acid. The hard, reddish wood is used in ordinary construction work and in furniture making. In the continental United States this species can probably be grown only in southern Florida. It is worthy of trial in tropical America generally and may prove useful in breeding to increase the acidity of the Chinese jujubes; its handsome foliage renders it attractive as an ornamental.





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# PLANT INTRODUCTIONS

FOURTEENTH ANNUAL LIST

1925 - 1926

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CONTAINING DESCRIPTIONS OF THE MORE IMPORTANT  
INTRODUCED PLANTS NOW READY  
FOR EXPERIMENTERS

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OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION  
BUREAU OF PLANT INDUSTRY  
UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C.

All plants intended for distribution to experimenters are inspected at the Plant Introduction Gardens by officers of the Federal Horticultural Board. At the time this Annual List goes to press the inspection has not been made. It is possible, therefore, that quarantine regulations may prohibit the distribution of a few plants herein described.

## PLANT INTRODUCTIONS.

Experimenters will please read carefully this Introductory

Note before sending in their requests for plant material.

This, the Fourteenth Annual List of Plant Introductions, contains descriptions of many new and rare plants, not yet widely tested in this country. The available information concerning some of them is meager, and it is therefore impossible to speak with assurance regarding their value, their cultural requirements, and their adaptability to the various climates and soils of the United States.

These plants have been imported because of some direct or indirect use which, it is believed, can be made of them. They are first placed at the disposal of the experts engaged in plant breeding, crop acclimatization, and horticultural investigations generally in the United States Department of Agriculture and the State Experiment Stations. Many of them have been grown in sufficient quantity, however, so that they can be distributed to private experimenters who have the facilities to test them carefully. The List is therefore sent to those who have qualified as Experimenters with the Office of Foreign Seed and Plant Introduction, and who have indicated a willingness to care for material sent them.

Accompanying this Annual List are complete Check Lists showing all seeds and plants available for distribution at the several Plant Introduction Gardens during the season 1925-26, and the Garden from which available. Applicants for material should fill out all blanks at the top of the Check List of each garden from which they request plants, place a mark to the left of the S.P.I. (Seed and Plant Introduction) number of each plant desired, and return the lists promptly to this Office.

It should be distinctly understood that the Office does not agree to supply all the plants requested. The object of the Annual List and the Check Lists is to place experimental material where it is thought the chances of success are best; to this end the experts of the Office will allot the available number of plants to those experimenters whose location and facilities seem most suitable, having in mind, at the same time, the order of receipt of the returned Check Lists, and giving preference to those which arrive first.

The shipping season extends, as a rule, from December first to April first. Because of the large quantity of plants which must be handled, it is difficult for the Office to single out individual requests and ship them at a certain date; where there are, however, valid reasons for requesting that material be sent at a specified time, every effort will be made to meet the requests.

These plants are placed in the hands of experimenters with the understanding that reports on their behavior will be sent to this Office from time to time. It is particularly desired that reports be sent to this Office regarding the flowering, fruiting, hardiness, utilization and other interesting features of plants which have been sent for trial; and it is

hoped that experimenters will at all times exercise care to preserve the original labels sent with the plants, or accurate plats showing the location and S.P.I. number of each one.

It will be necessary for experimenters to preserve and refer to the Annual List of Plant Introductions, or to the Inventories published by the Office, for information regarding the plants. Each Inventory lists the seeds and plants imported during a period of three months. Its object is to serve as an historical record; it is not printed immediately following the arrival of the plants, but eighteen to twenty-four months later. The edition is limited, and it cannot be supplied to all experimenters. This makes essential the preservation of the Annual List as a work of reference, and the Office desires to urge upon its cooperators the importance of this step. Unless the Annual Lists are preserved, the Office will be flooded with inquiries from people who have received plants, and who desire information concerning them. Such inquiries involve much unnecessary labor and expense.

For convenience in using the Annual List, after each description is given, in parenthesis, the name of the Garden from which the plants will be sent.

DESCRIPTIVE LIST.

58499. *ABIES* sp. Fir. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A handsome tree 60 feet high, with a trunk 2 to 3 feet in diameter, which grows along stream beds on the eastern slopes of the Likiang Snow Range at an altitude of about 11,000 feet. The needles are not silvery beneath, and the greenish white cones are erect. Probably hardy except in the extreme north. (Bell, Md.)

58901. *ACER CAMPBELLII*. Maple. From India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden, Darjiling. The bright-green leaves and red stalks of this Himalayan maple make it worthy of trial as an ornamental shade tree for the southern half of the United States. (Bell, Md.)

58902. *ACER HOOKERI*. Maple. From India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden, Darjiling. A handsome shade tree, 40 to 50 feet high, native to the Himalayas at altitudes of about 10,000 feet. The bark is brown and deeply fissured, the leaves oval and not lobed as in more familiar species, - sometimes they are copper-colored as in some of the Japanese maples. The wood, which is gray with small pores and numerous fine medullary rays, is very handsome. Probably not hardy north of southern Ohio. (Bell, Md.)

58903. *ACER LAEVIGATUM*. Maple. From India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden, Darjiling. Suggested as a park tree in mild-wintered regions of the United States. The bark is yellowish or dark ash-colored, and the oblong, nearly entire, leaves are a pleasing green. (Bell, Md.)

58817. *ACER* sp. Maple. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A tree 60 to 80 feet tall, with a large crown and a trunk 3 feet in diameter, which grows along water-courses at the foot of the Likiang Snow Range at about 9,000 feet altitude. Probably hardy only in the southern United States and California. (Bell, Md.)

61481. *ALBIZZIA PROCERA*. From Tanganyika Territory, Africa. Presented by Alleyne Leechman, Director, Biological and Agricultural Institute. A tall, handsome, tropical, leguminous tree, often 60 to 80 feet high, with greenish white bark, large compound leaves, and terminal panicles of yellowish flowers. In southern and eastern India, where the tree is native, the brown heartwood is used for making tools. For trial in California and the Gulf States. (Chapman Field, Fla.)

61594. *ALBIZZIA PROCERA*. From India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden, Darjiling. (Chapman Field, Fla.)

39434. *AMPELOPSIS ACQUITIFOLIA*. From Pingyanfu, Shansi, China. Collected by Frank N. Meyer, Agricultural Explorer. This is a handsome vine related to the Virginia creeper, with yellow-green, cut-toothed leaves and yellow berries. It is valued as a porch and pergola vine on account of its rapid growth and comparative hardiness. Probably hardy as far north as southern Ohio. (Chico, Calif.)

24807. AMYGDALUS PERSICA. Peach. From Tashkent, Turkestan. Collected by N. E. Hansen, Agricultural Explorer. A small, white, freestone peach, with melting, juicy flesh of unusually delicate texture. It is highly flavored, and an excellent peach for the home garden, but too small to be valuable commercially. At the Plant Introduction Garden, Chico, California, it has shown promise as a stock on which to bud other peaches. (Chico, Calif.)

32374. AMYGDALUS PERSICA. Peach. This variety originated at the Government Experiment Farm, San Antonio, Texas, among a lot of plants grown from seeds secured in Mexico. It is a medium-sized clingstone fruit, with firm, sweet, golden-yellow flesh of good texture and unusually fine flavor. Promising for home canning purposes. At Chico, California, it matures in late August; at San Antonio, Texas, about the first of September. (Chico, Calif.)

33219. AMYGDALUS PERSICA. Vainqueur Peach. From Granada, Spain. Scions imported by Dr. Walter T. Swingle, Bureau of Plant Industry. A very early ripening clingstone peach with white or greenish skin flushed with red and weighing about 4 ounces. The pit is pink and the soft, white, juicy flesh is of good quality for an early peach. Although a clingstone, when fully ripe, the flesh can be separated from the stone. This variety has proved hardy as far north as Massachusetts, has done well also in the Pacific Coast States, and appears to have promise for home use and near-by markets. (Chico, Calif.)

35201. AMYGDALUS PERSICA. Peach. Original introduction from Mengtsze, Yunnan, China. Seeds presented by the Commissioner of Customs. Budded plants are available from a selected seedling. The fruit of this variety is a fine golden cling averaging about 4 ounces in weight. The pit is flattened, not marking the pure-yellow flesh, which is very firm and of good quality. This peach should prove excellent for commercial canning. (Chico, Calif.)

36485. AMYGDALUS PERSICA. Peach. From the Kuram Valley, northwestern India. Obtained through Major G. J. Davis, Commandant, Kuram Militia. This remarkable clingstone peach, originally secured from India under the name of Shalil, is of vigorous growth and unusual leaf habit. The fruit somewhat resembles the Muir in general appearance; it is oval, with yellow skin; bright-yellow, fairly firm, juicy flesh; and rather large pit. J. E. Morrow, superintendent of the Chico Garden, reports that it seems satisfactory for canning and drying; and its seedlings are being used with excellent success as stocks on which to bud other varieties. (Chico, Calif.)

38178. AMYGDALUS PERSICA. Fei Peach. From Feitcheng, China. The fruits of this clingstone variety are greenish white and large, averaging about 8 ounces in weight. The flesh is creamy white, sweet, very juicy and of good flavor and texture; pit yellow, rather large. It should be excellent for home use, and also has good keeping and shipping qualities. At Chico, California, it has proved to be vigorous and moderately prolific, ripening there in late August. (Chico, Calif.)

41395. AMYGDALUS PERSICA. Dwarf Peach. From Kiayingchau, Kwangtung, China. Seeds presented by George Campbell. A dwarf, evergreen, ornamental Chinese peach with showy flowers, grown in its native land as a house plant. At the Plant Introduction Garden, Chico, California, a tree of this variety is about 7 feet high, with a spread of 10 feet, and with deep-green, heavy, compact evergreen foliage. The small, white clingstone fruits, about 2 inches in diameter, are prettily colored and fragrant with firm, acid, greenish white flesh, stained dark red near the pit, and insipid in flavor. Ripening season at Chico early September. (Chico, Calif.)

43124. AMYGDALUS PERSICA. A 1 Peach. From New Zealand. Plants presented by H. R. Wright. At Chico, California, this has proved to be a vigorous and prolific clingstone variety. The oval fruits, averaging 6 ounces in weight, are yellow splashed with red, with yellow, acid, very juicy flesh, of good flavor, stained by the large, red pit. It is probable that this variety is best suited for home use or for shipment to near-by markets. Ripening season at Chico late July to early August. (Chico, Calif.)

43127. AMYGDALUS PERSICA. Ideal Peach. From New Zealand. Plants presented by H. R. Wright. An elongated oval, freestone peach, about 2 1/2 inches in length, with yellow, red-mottled skin, and firm, lemon-yellow, mildly acid flesh of good quality. The pit is pink, staining the flesh slightly. In California this variety ripens about the middle of July; in Georgia slightly later, and in New Jersey at the same time as the Elberta. It has promise for home use, and also for drying and shipping. (Chico, Calif.)

43129. AMYGDALUS PERSICA. Late Champion Peach. From New Zealand. Plants presented by H. R. Wright. This late-maturing freestone peach appears to thrive as far north as New Jersey and southern Michigan, in Oklahoma, and also in California. The tree is large and vigorous, and bears a good crop of roundish fruit about 2 1/2 inches in diameter. The skin is yellow, tinged with red, and the golden-yellow flesh is sweet, juicy, and of good texture. The pit is small and pink. At Chico, California, it matures early in October; it is of promise as a late dessert peach, and should be good for shipping and canning. (Chico, Calif.)

43132. AMYGDALUS PERSICA. Motion's Cling Peach. From New Zealand. Plants presented by H. R. Wright. A large, handsome, clingstone peach, weighing 7 to 8 ounces, with yellow skin tinged with red. The firm, yellow flesh is juicy and subacid, rather lacking in flavor; the pit is large and dark red, not staining the flesh. This variety appears to be promising for canning. At Chico, it ripens early in September; in New Jersey, where it has proved hardy, it ripens at the same time as the Elberta. (Chico, Calif.)

43133. AMYGDALUS PERSICA. Muir's Perfection Peach. From New Zealand. Plants presented by H. R. Wright. A mid-season, freestone peach, about 2 1/4 inches in diameter, with a creamy white skin splashed with red, and with mildly acid, soft, white flesh, stained by the large red pit. Of value chiefly as a home fruit. It is an abundant bearer, and hardy as far north as New Jersey. In California it ripens late in July; in New Jersey at the same time as the Elberta. (Chico, Calif.)
43135. AMYGDALUS PERSICA. Paragon Peach. From New Zealand. Plants presented by H. R. Wright. A light-yellow clingstone peach, about 3 inches long, with juicy, light-yellow flesh of good quality. It ripens late in July in California, and early in September in New Jersey. Adapted for canning. (Chico, Calif.)
43137. AMYGDALUS PERSICA. Up-to-Date Peach. From New Zealand. Plants presented by H. R. Wright. A vigorous, prolific variety which bears freestone fruits, averaging about 6 ounces in weight, with golden-yellow skin mottled with red. The sweet, juicy, melting flesh is of high quality; the medium-sized pit is pink, slightly staining the flesh. Its ripening season is the same as that of Elberta, and it thrives as far north as New Jersey. For trial as a home fruit, and for shipping and drying. (Chico, Calif.)
43289. AMYGDALUS PERSICA. Peach. Ying Tsui T'ao (Eagle's Beak Peach). Original introduction from Canton, China. Seeds presented by P. H. Josselyn, American Vice Consul. Budded plants available from a selected seedling. This is a small, white, freestone peach with sweet, white flesh and a red pit. Of value for home use. Ripens at Chico, California, early in July. Adapted to sections of the United States too warm for our commercial varieties. (Chico, Calif.)
43290. AMYGDALUS PERSICA. Peach. From Canton, China. Presented by P. H. Josselyn, Vice Consul in charge. A round, very sweet, honey-flavored peach, which came originally from Manchuria. (Chico, Calif.)
43569. AMYGDALUS PERSICA. Bresquilla Peach. From Valencia, Spain. Presented by John R. Putnam, American Consul. A round, yellow clingstone peach, averaging 5 ounces in weight, with golden-yellow flesh of firm texture. At the Plant Introduction Garden, Chico, California, where this variety matures its fruit about the first of September, it is considered promising as a canning peach. The tree is a strong, vigorous grower. (Chico, Calif.)
55487. AMYGDALUS PERSICA. Pomona Improved Peach. From Santa Ines, Chile. Presented by Salvador Izquierdo. Sr. Izquierdo writes that this is an improved form of the variety Pomona, grown at his nursery at Santa Ines. Described as a fruit of unusually large size, deep yellow, clingstone, and of excellent quality for canning. (Bell, Md.)
55549. AMYGDALUS PERSICA. Goodman's Choice Peach. From Eastwood, New South Wales. Obtained through H. R. Wright, Avondale, Auckland, New Zealand. In Australia nurserymen consider this their best yellow-fleshed clingstone peach. Each season the tree bears a heavy crop of medium-sized fruits. The skin has a red blush, and the flesh is rich and translucent; the variety is remarkable for even crops and gradual ripening. In Australia the fruit matures toward the end of February, making it a late-ripening variety for that country. It should be tested in California and other peach-canning regions. (Bell, Md., and Chico, Calif.)



55563. AMYGDALUS PERSICA. Peach. Plants budded from a seedling grown and selected at the Plant Introduction Garden, Chico, California, from seeds obtained through John R. Putnam, American Consul at Valencia, Spain. The fruits of this variety are large and yellow with a red blush. The flesh is golden yellow throughout and of excellent flavor; the pit is small. The fruits weigh, on the average, 9 ounces. This variety promises to be of value as a commercial canning peach. It remains firm when cooked, maintains its delicate flavor, and does not require a very heavy sirup. The fruits ripen at the Chico Plant Introduction Garden about August 20. (Chico, Calif.)

55564. AMYGDALUS PERSICA. Peach. Plants budded from a selected seedling. Grown and selected at the Plant Introduction Garden at Chico, Calif., from seeds obtained through John R. Putnam, American Consul at Valencia, Spain. The fruits are a fine golden yellow, blushed red, with a deep basin and distinct suture. The pit is small and yellow, not coloring the flesh, which is firm and of fine flavor. It is a good shipper and may prove excellent for canning. The average weight of the fruits is about 5 ounces. The variety ripens at the Chico Garden about the middle of August. (Chico, Calif.)

55813. AMYGDALUS PERSICA. Peach. Seedling grown at the Plant Introduction Garden, Chico, California. This tree has matured a heavy crop of exceptionally delicious freestone peaches. The fruit is yellow with red cheeks, slightly flattened at the ends and bulging in the center, about 3 inches in diameter, and 2 3/4 inches long. The basin is wide and shallow, the suture rather indistinct. The flesh is yellow, very juicy, and of fine quality. In flavor this variety compares favorably with Late Crawford; it is about a week later than Elberta, and in texture it is better than the latter. (Chico, Calif.)

55835. AMYGDALUS PERSICA. Peach. Seedling of the variety Tardio Amarillo from Spain, grown at the Plant Introduction Garden, Chico, Calif. The fruits are 2-1/8 by 2-1/4 inches, weighing on the average 4 ounces; the skin is golden with a faint blush, the basin deep and narrow; the depression at the suture slight. Both flesh and pit are yellow. The season for this variety in Chico is early September. This is a good canning clingstone peach and a heavy bearer. (Chico, Calif.)

55836. AMYGDALUS PERSICA. Peach. Seedling of the variety Tardio Amarillo from Spain, grown at the Plant Introduction Garden, Chico, California. The fruits are 2 by 2 1/2 inches, weighing 4 ounces on the average; the basin is deep and narrow and the suture visible only as a line; the flesh is deep yellow, of good texture and flavor; the pit is small and yellow. This clingstone peach ripens at Chico late in August and should be tested for canning purposes. (Chico, Calif.)

26503. AMYGDALUS PERSICA NECTARINA. Nectarine. Original introduction from Sinkiang, China. Presented by E. Cotes. The fruits are large, freestone, and pale yellow with a red blush. The flesh is creamy white, red at the stone, juicy, crisp, subacid, and of very good quality. The fruit, which matures about the middle of August at Chico, California, keeps well in shipment. Budded plants are available from a selected seedling. (Chico, Calif.)

34685. AMYGDALUS PERSICA NECTARINA. Quetta Nectarine. Presented by Lieut. W. L. Maxwell, Quetta, Baluchistan. The tree is large, handsome, and unusually hardy for a nectarine, although it thrives best in regions not having severe winters. The large, round fruits, slightly over 2 inches in diameter, are green, heavily blotched with red. The greenish flesh, strongly marked with red around the pit, is juicy and of rich, tart flavor. This is an unusually good nectarine, sufficiently firm to ship well. (Chico, Calif.)

43139. AMYGDALUS PERSICA NECTARINA. Ansenne Nectarine. From New Zealand. Plants presented by H. R. Wright. Fruits large, nearly 2 1/2 inches long, freestone, dark red on the exposed side, cream-colored dotted with red on the unexposed side. The flesh, which is creamy white, melting and juicy, and stained by the light red pit, is of excellent quality but very soft and perishable. The tree is prolific. At Chico, California, this variety ripens late in July or early in August. (Chico, Calif.)

43140. AMYGDALUS PERSICA NECTARINA. Diamond Jubilee Nectarine. From New Zealand. Plants presented by H. R. Wright. The fruits of this freestone variety are about 2 inches in diameter and are dark green with a dark-red cheek. The creamy yellow flesh which is somewhat stained by the light-red pit, is very juicy, sweet, and of excellent flavor and quality. At Chico, California, it ripens from late July to early August. (Chico, Calif.)

43141. AMYGDALUS PERSICA NECTARINA. Gold Mine Nectarine. From New Zealand. Plants presented by H. R. Wright. A prolific freestone variety bearing fruits which average 2 1/4 inches in length, with red and yellow skin, and creamy white flesh of excellent flavor and high quality. The light red pit is of medium size. At Chico, California, this nectarine ripens in late July and early August, and in central New Jersey at the same time as the Elberta peach. (Chico, Calif.)

43142. AMYGDALUS PERSICA NECTARINA. Lippiatt's Late Orange Nectarine. From New Zealand. Plants presented by H. R. Wright. The fruits of this freestone variety are about 2 inches in diameter, with deep-orange skin mottled with red; the flesh is firm, juicy, sweet, and of good texture with an excellent flavor. It should be a very good shipper. At Chico, California, it ripens in late July or early August. (Chico, Calif.)

43143. *AMYGDALUS PERSICA NECTARINA*. Muir's Seedling Nectarine. From New Zealand. Presented by H. R. Wright. A large, handsome, freestone nectarine, averaging over 3 ounces in weight, with red skin and white flesh which is juicy and of excellent quality and delicious flavor. The pit is of medium size and pink, slightly staining the flesh. At Chico, California, it ripens late in July. (Chico, Calif.)

43144. *AMYGDALUS PERSICA NECTARINA*. New Boy Nectarine. From New Zealand. Plants presented by H. R. Wright. A prolific freestone variety, bearing large, round fruits about 2 inches in diameter. The skin is green splashed with red, and the greenish white flesh is juicy and of good flavor, deeply stained by the light red pit. The thin skin makes this a poor shipper. At Chico, California, it ripens from late July to early August. (Chico, Calif.)

43146. *AMYGDALUS PERSICA NECTARINA*. Surecrop Nectarine. From New Zealand. Plants presented by H. R. Wright. A variety producing a large crop of greenish, red-cheeked fruits about 2 inches in diameter. The tender, juicy flesh is sweet and of high quality, deeply stained by the rather large, red pit. At Chico, California, this nectarine ripens late in July or early in August. (Chico, Calif.)

26565. *ARALIA CORDATA*. Udo. From Japan. A spring salad vegetable, very popular in Japan, which, when properly grown and suitably prepared for the table, is a great delicacy. The young shoots are blanched by mounding with earth or by covering with closed drain tiles in the early spring. In Nova Scotia these are available two weeks before asparagus. The shoots are sliced, chilled in ice water, and served with French dressing, or are cooked and served like asparagus. They have a delicate and delicious piney flavor if the blanching has been thorough. The plants, which continue to yield for about 9 years, are set 3 or 4 feet apart and in summer make an attractive screen of foliage 4 to 6 feet high which dies down in the fall. Udo is certain to grow in favor in this country as soon as the correct methods of culture and preparation are generally understood. Special directions will be furnished on application. (Bell, Md.)

61638. *ASPARAGUS* sp. From the Union of South Africa. Collected by Dr. H. L. Shantz, Agricultural Explorer. An ornamental asparagus, to be tested in the southern United States and California. (Bell, Md.)

59405. *ASTER STATICEFOLIUS*. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A shrubby aster, 2 to 3 feet high, found growing in the crevices of limestone rocks at 11,000 feet altitude. The leaves are spatulate, the flowers large, and the ray flowers deep blue-purple. For trial in all but the coldest parts of the United States. (Bell, Md.)

56292. *BENZOIN* sp. Spice Bush. From China. Collected by J. F. Rock, Agricultural Explorer. Along the Taiping River this is a common small tree with a spreading crown. The trunk is sometimes a foot or more in diameter, though usually less, and the leathery aromatic leaves are dark green and glossy. From the scarlet, one-seeded fruits, borne in short clusters, is obtained a white, oily liquid used to make a yellow wax which is valued in

China for softening leather, for burning, and for other household purposes. It is an ornamental dooryard tree, especially attractive on account of its delightfully pungent leaves and brilliant fruits. For trial in all but the coldest sections of the United States. (Bell, Md., and Savannah, Ga.)

61326. *BILLARDIERA LONGIFLORA*. Pittosporaceae. From Hobart, Tasmania. Presented by L. A. Evans, Secretary of Agriculture, Agricultural and Stock Department. A twining shrub, sometimes several feet in length, with leaves varying from oval to linear and 2 inches long. The blue flowers are pendulous on solitary stems an inch long. For trial in the southern half of the United States. (Chico, Calif.)

58904. *BUDDLEIA COLVILLEI*. From India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden, Darjiling. With large, loose, terminal clusters of crimson flowers, and smooth, dark-green leaves, this Himalayan relative of the well-known butterfly bush has been called the handsomest of the genus. It is a shrub or small tree, 30 to 40 feet high, and has proved hardy in some parts of England and Scotland. For trial in the southern United States. (Bell, Md., and Chico, Calif.)

56294. *BUDDLEIA FORRESTII*. From China. Collected by J. F. Rock, Agricultural Explorer. This very attractive ornamental shrub, closely related to the butterfly bush, is found on the pure limestone soils of the Likiang Snow Range at altitudes of about 10,000 feet. The foliage is covered with a dense coat of heavy white wool which forms a pleasing contrast to the spikes of lavender-blue flowers. For trial in the southern United States, especially in limestone soils. (Chico, Calif.)

59004. *BUDDLEIA FORRESTII*. From China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. This very attractive shrub is found on the pure limestone soils of the Likiang Snow Range at altitudes of about 10,000 feet. The foliage is covered with a dense coat of heavy white wool which forms a pleasing contrast to the spikes of lavender-blue flowers. For trial in all but the coldest sections of the United States. (Bell, Md.)

56295. *BUXUS* sp. Box. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A very handsome shrub about 5 feet high; which grows among limestone boulders on the Likiang Snow Range at an altitude of 11,000 feet. The small, elliptical leaves are bright green. For trial in all but the coldest sections of the United States. (Bell, Md.)

58370. *BYRSONIMA SPICATA*. From Dominica, British West Indies. Presented by Joseph Jones, Curator, Botanic Gardens. A tree of the West Indies and northern Brazil, reaching a height of 30 to 40 feet, and bearing yellow flowers followed by small fruits of the same color, acid, and said to be good eating when ripe. The bark is a source of tannin, and is used to prepare a red dye. Suggested for trial in Florida, and those tropical regions where it is not yet cultivated. (Bell, Md.)

63344. *CARAGANA BOISI*. From China. Presented by L. Parde, Directeur de l'Arboretum, Nogent-Loiret, France. A leguminous shrub, native to Szechwan and eastern Tibet, China. It grows 10 to 12 feet high and has long, gracefully arching branches. The bright-yellow flowers make it a handsome decorative plant. Probably hardy except in the extreme north. (Bell, Md.)

56392. *CASTANEA MOLLISSIMA*. Chinese hairy chestnut. A hardy, blight-resistant chestnut from northern China, producing nuts of good quality, closely resembling our native chestnut in size, shape, and color. For distribution only in states east of the Allegheny Mountains, where native chestnuts grew. Small three-year-old trees will be distributed from Bell, Maryland, to experimentors who will care for one-half to one acre, or 127 to 134 trees. Under good culture trees should begin to bear when five or six years old. Details of planting and care will be sent on application. (Bell, Md.)

61484. *CASUARINA DISTYLA*. From Tanganyika Territory, Africa. Presented by Alleyne Leechman, Director, Biological and Agricultural Institute. Unlike many of the better-known casuarinas, this is usually a shrub only 2 or 3 feet high, with erect or spreading branches. It is common in Tasmania and in parts of southern Australia. For trial in southern California and in Florida as an ornamental shrub. (Chapman Field, Fla.)

63765. *CASUARINA DISTYLA*. From Tanganyika Territory, Africa. Presented by A. H. Kirby, Director of Agriculture. (Chapman Field, Fla.)

62018. *CASUARINA SUBEROSA*. From Hobart, Tasmania. Presented by L. A. Evans, Secretary of Agriculture, Agricultural and Stock Department. In southern Florida *C. equisetifolia* has become quite thoroughly naturalized on the lower keys, where it is popular as a shade tree. This Tasmanian species, which is a tree 30 to 40 feet tall, is said to be similar to *C. equisetifolia*, and should also be tested in southern Florida. (Chapman Field, Fla.)

62664. *CASUARINA* sp. From Algeria. Collected by Dr. David Fairchild, Agricultural Explorer. Probably a hybrid between *Casuarina suberosa* and *C. cunninghamiana*. At the Jardin d'Essais, Maison Carrée, Algeria, where this form appeared, it has produced, by judicious clipping, a beautiful hedge, and has endured a temperature of less than 26° F. without injury. It should be tested for hardiness a little farther north in Florida and California than the range where *C. equisetifolia* now grows. (Chapman Field, Fla.)

63668. *CASUARINA* sp. From Maison Carrée, Algeria. Collected by Dr. David Fairchild, Agricultural Explorer. An unidentified casuarina resembling *C. suberosa* but having shorter cones. An attractive tree of spreading habit growing in the grounds of the first president of the Société Botanique de France. To be tested in the warmer parts of the southern and southeastern United States. (Chapman Field, Fla.)

55985. *CHAENOMELES* sp. Chinese Quince. From China. Collected by J.F. Rock, Agricultural Explorer. A tree, 50 to 80 feet high, which has been domesticated by the Chinese around Talifu, Yunnan, where it is called Mu kua. The very aromatic fruits, rich yellow with a reddish tinge, have firm yellow flesh; they make jelly and preserves closely similar to those prepared from the common quince. Probably tender north of southern Ohio. (Bell, Md.)

62405. *CHAENOMELES* sp. From Peking, China. Collected by P. H. Dorsett, Agricultural Explorer. A medium-sized, bright yellow quince whose chief attraction is its fragrance. For trial in all but the coldest sections of the United States. (Bell, Md.)

21617. *CHIONANTHUS RETUSA*. Chinese Fringe Tree. From Shantung, China. Collected by Frank N. Meyer, Agricultural Explorer. A beautiful deciduous, hardy, ornamental tree bearing in spring a multitude of white, deliciously fragrant flowers with handsome fringed petals, followed in the fall by masses of blue berries resembling wild grapes. This tree is used by the Chinese as a stock on which to graft their scented olive, Osmanthus fragrans. It is superior to the Virginia fringe tree (C. virginica) because of the whiteness and fragrance of its flowers, and its more graceful habit. (Chico, Calif.)

58606. *CLEMATIS TANGUTICA* *OBTUSIUSCULA*. From Central Asia. Seeds presented by Vicary Gibbs, Aldenham House Gardens, Herts, England. A handsome ornamental climbing shrub with nodding solitary yellow flowers on erect peduncles. The leaves, 3 to 5 inches long, consist of lanceolate toothed segments up to 2-1/2 inches long. Probably hardy throughout the United States. (Bell, Md.)

62904. *CLITORIA LAURIFOLIA*. From Eala, Belgian Congo. Presented by V. Goossens, Director, Botanic Garden. An erect, herbaceous, leguminous plant, native to Trinidad, with hairy stems and leaves, and pink flowers resembling sweet peas. For trial in southern Florida. (Chapman Field, Fla.)

61643. *COPAIVA COLEOSPERMA*. From Victoria Falls, Southern Rhodesia. Collected by Dr. H. L. Shantz, Agricultural Explorer. A handsome, evergreen, leguminous tree of excellent habit, reaching a height of 60 feet, and with attractive, pinnate foliage. The small, white flowers are in panicles. For trial in the extreme southern United States and in southern California. (Chapman Field, Fla.)

56302. *CORNUS CAPITATA*. Dogwood. From western China. Collected by J. F. Rock, Agricultural Explorer. A very handsome deciduous or partially evergreen flowering tree of bushy habit. As in the American flowering dogwood, the apparent petals are really large, showy, cream-white or yellow bracts 2 inches long, subtending the cluster of inconspicuous flowers. Before falling, the bracts turn ruddy. The fruit is a fleshy, strawberry-shaped, crimson head a little more than an inch wide, with yellow, sweet, and edible flesh, and very popular in China where it is sold in the markets. For trial in all but the coldest sections of the United States. (Savannah, Ga.)

56024. *CORNUS OFFICINALIS*. Originally from Chosen. Presented by John Dunbar, Assistant Superintendent of Parks, Rochester, N. Y. Like *Cornus mas*, this plant has yellow flowers and red fruits but differs in having conspicuous patches of dense, rust-colored down on the lower surfaces of the leaves, and also it is somewhat coarser in habit. Probably hardy except in the extreme north. (Bell, Md.)

59007. *CORYLOPSIS* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A very handsome tree 20 feet high, belonging to the witch-hazel family; it is found at 10,000 feet altitude on the slopes of Mount Kenichunpu. The leaves are fan-shaped with prominent veins which radiate like the segments of a fan. Probably hardy as far north as Philadelphia. (Bell, Md.)

52677. *COTONEASTER DAMMERI RADICANS*. From China. Presented by Vilmorin-Andrieux & Co., Paris, France. A prostrate variety which differs from the typical form also in having few-flowered clusters on long flower-stalks. For trial chiefly in the southern United States and California. (Bell, Md.)

40575. *COTONEASTER DIELSIANA*. Originally from western China. Seeds collected at the Arnold Arboretum. An ornamental shrub attaining 6 feet in height with slender arching branches, firm, oval leaves, and pinkish flowers in small clusters, followed by attractive small red fruits. Probably hardy except in the extreme north. (Bell, Md.)

55873. *COTONEASTER HEBEPHYLLA*. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A handsome, deciduous shrub 10 to 18 feet high, found growing in limestone soil at from 10,000 to 11,000 feet altitude. It has long rambling branches, white flowers, and dark-carmine fruits. For trial in all but the coldest parts of the United States. (Chico, Calif.)

62572. *COTONEASTER SALICIFOLIA*. From China. Presented by Vicary Gibbs, Aldenham House Gardens, Herts, England. A half-evergreen shrub, sometimes 15 feet in height, with white flowers produced in dense corymbs about 2 inches across, and bright-red fruits, which, ripening in October, make the shrub particularly ornamental. For trial in all but the coldest sections of the United States. (Bell, Md.)

40175. *COTONEASTER ZABELI*. From western Hupeh, China. An ornamental shrub up to 8 feet high, with oval elliptic leaves and pink flowers in loose clusters, followed by attractive red fruits. For trial in all but the coldest sections of the United States. (Bell, Md.)

56304. *COTONEASTER* sp. From China. Collected by J. F. Rock, Agricultural Explorer. An ornamental, prostrate shrub from the mountains of Yunnan, China. It has small, elliptical, dark-green leaves, and small, red berries of attractive appearance. Probably not hardy in the extreme north. (Chico, Calif.)



58820. *COTONEASTER* sp. From Yunnan, China. Seed collected by J. F. Rock, National Geographic Society, Washington, D. C. A small tree, about 20 feet high, which grows wild in deciduous forests at 12,000 feet altitude. It has small, oval leaves and black fruits. Probably tender north of southern Ohio. (Bell, Md.)

58821. *COTONEASTER* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A shrub about 5 feet high from the drier slopes of the Likiang Snow Range at an altitude of about 10,000 feet. It has small oval leaves, pale beneath and round, scarlet berries. Probably tender north of southern Ohio. (Bell, Md.)

59408. *COTONEASTER* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A much-branched spiny shrub, 4 to 5 feet high, found in meadows at 9,000 feet altitude. The leaves are small and linear, and the berries are rich orange-red. Probably tender north of southern Ohio. (Bell, Md.)

39557. *CRATAEGUS LAVALLEI*. Hawthorn. From California. Presented by Frank J. Hart. A hawthorn originally from France and probably of hybrid origin. It is a small shrubby tree about 20 feet high with few-flowered clusters of large, white flowers having red disks and followed in autumn by bright orange fruits, well set off by the lustrous leaves. (Chico, Calif.)

61489. *CUPRESSUS FUNEBRIS*. Var. *glauca*. Cypress. From Tanganyika Territory, Africa. Presented by Alleyne Leechman, Director, Biological and Agricultural Institute. A glaucous variety of the mourning cypress (*C. funebris*); the typical form is a wide-spreading, pendulous, Chinese tree. To be tried in Florida and southern California. (Chapman Field, Fla.)

32882. *CYDONIA OBLONGA*. Quince. From Granada, Spain. Presented by Pedro Giraud. A large, round yellow quince with firm, white flesh of good flavor and quality; the seed cavity is rather large, containing numerous seeds. Reports from southern California indicate that it cooks softer and more quickly than other quinces. Ripens at Chico, California, early in November. Probably hardy except in the extreme north. (Chico, Calif.)

33214. *CYDONIA OBLONGA*. De Antequera Quince. From Granada, Spain. Purchased from Pedro Giraud. A fairly prolific variety which bears round-oblately fruits with yellow skin and light-yellow non-astringent flesh good for eating out of hand. It is good for cooking and preserving and makes excellent jelly. At Chico, California, it ripens the first week of November. Probably hardy except in the extreme north. (Chico, Calif.)

61601. *DALBERGIA SERICEA*. From India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden, Darjiling. A small, leguminous tree from the mountains of Nepal. The branches and leaves are covered with reddish hairs, and the flowers, which are in compact, axillary clusters, are pale lilac. For trial as an ornamental tree in southern California and Florida. (Chapman Field, Fla.)



62677 and 62678. *DELOSTOMA ROSEUM*. Cholan. From Ambato, Ecuador. Collected by Dr. Wilson Popenoe, Agricultural Explorer. A small, bignoniaceous tree, native to Ecuador, cultivated there occasionally in parks and gardens. Its lilac flowers resemble those of the catalpa in size and form. Probably sufficiently hardy to be grown in southern Florida. (Chapman Field, Fla.)

62677. A form with pale-lilac flowers.

62678. A form with deep-lilac flowers.

62012. *DEUTZIA LONGIFOLIA*. From China. Presented by Vilmorin-Andrieux & Co., Paris, France. A shrub about 6 feet high, with narrow leaves, whitish below, and rosy flowers, about an inch across, produced in rounded clusters 2 or 3 inches in diameter. This is considered one of the handsomest of the deutzias, and is hardy at least as far north as southern Massachusetts. (Bell, Md.)

59705. *DEUTZIA* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A shrub 5 to 8 feet high, with small, oval, hairy leaves; the deep-lavendar-purple flowers are in small racemes. For trial in all but the coldest sections of the United States. (Bell, Md.)

62416. *DEUTZIA* sp. From Chihli, China. Collected by P. H. Dorsett, Agricultural Explorer. Many of the deutzias are popular ornamental shrubs and this hardy Chinese species, not yet identified, may prove of interest in this country. Probably hardy except in the extreme north. (Bell, Md.)

61602. *DUABANGA SONNERATIOIDES*. Lythraceae. From India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden, Darjiling. A tall, deciduous tree from the cool, mountainous districts of northeastern India, which has merit as an ornamental tree because of its large, terminal panicles of white flowers. For trial in the Gulf States and California. (Chapman Field, Fla.)

59414. *ENKIANTHUS* sp. Ericaceae. From Tibet, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A handsome shrub, 8 to 15 feet high, which grows in southeastern Tibet at an altitude of 9,000 feet. It has oval, bright-green leaves and bell-shaped flowers, yellow with green stripes, produced in large clusters. For trial in all but the coldest sections of the United States. (Bell, Md.)

58822. *ERIOBOTRYA* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. An attractive shrub, 4 feet high, related to the Japanese loquat and found in rather dry places at 8,000 feet altitude. It has pale-green, roundish, serrate leaves and corymbs of carmine fruits. Probably tender north of southern Ohio. (Bell, Md.)

58127. *EUCALYPTUS DELEGATENSIS*. Gum-topped Stringy-bark. From Hobart, Tasmania. Presented by L. A. Evans, Secretary of Agriculture, Agricultural and Stock Department. This tree, originally described by Hooker under the name *D. gigantea*, is reported to attain large dimensions. It is described as erect, the branches usually short and ascending, the bark thin-fibrous, and the foliage very similar to that of *E. obliqua*. For trial in the extreme southern United States and in California. (Chico, Calif.)

58628. *EUCALYPTUS DELEGATENSIS*. From Tasmania. Presented by J. G. Lipman, Director, New Jersey Agricultural Experiment Station. (Chico, Calif.)

61833. *EUCALYPTUS PAUCIFLORA*. From Hobart, Tasmania. Presented by L. A. Evans, Secretary of Agriculture, Agricultural and Stock Department. The White Gum, as this eucalypt is known in Australia, attains there a height of 100 feet and a diameter of about 4 feet. It grows well in swampy lowlands and the timber is used for general building purposes. For trial in the Gulf States and California. (Chico, Calif.)

54777. *EUGENIA DOMBEYI*. Grumichama. Presented by G. Regnard, Port Louis, Mauritius Island, Africa. A shapely attractive tree native to Brazil, attaining the size of an orange tree; it has handsome foliage and small white flowers which are followed in a month by the mature pendent deep-crimson fruits, the size of cherries. The skin is thin and delicate; the soft, melting, subacid flesh is usually eaten fresh but may also be used to make jam or preserves. Seedlings bear when four or five years old. In Florida this tree has withstood 26° F. without injury. (Bell, Md.)

57270. *EUGENIA DOMBEYI*. From Hawaii. Presented by Willis T. Pope, Horticulturist, Agricultural Experiment Station, Honolulu, Hawaii. (Bell, Md.)

56313. *EUONYMUS* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. An ornamental tree 30 to 40 feet high, with rich-green, narrow, sharply pointed leaves and red fruits. It is native to the mountains of Yunnan at altitudes of 12,000 feet, and should be tested in this country as far north as Massachusetts. (Bell, Md.)

59415. *EUPHELEA PLEIOSPERMA*. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A graceful tree 30 to 40 feet high, with broadly oval, long-pointed leaves and red flowers. It is related to the magnolias, and is found wild at high altitudes in southwestern China. For trial in all but the coldest parts of the United States. (Bell, Md.)

61010. *FICUS* sp. Tibig. From Manila, Philippine Islands. Presented by P. J. Wester, Bureau of Agriculture. A native Philippine fruit about 1 1/2 inches in diameter, with juicy, sweet flesh resembling the cultivated fig in flavor, which Mr. Wester believes is of promise in moist, tropical regions where the common fig cannot be grown. The tree is upright and of medium size. For trial in extreme southern Florida and tropical America. (Chapman Field, Fla.)

32704. *GARCINIA LIVINGSTONEI*. Pembe. Mozambique, Africa. Presented by Pliny W. Keys, Inhambane. A small compact bush with stiff, very stout branchlets. The small, white flowers are followed by elliptic fruits 2 inches long, orange-yellow when fully ripe. The leathery skin incloses light-colored, juicy flesh and two large seeds; the flavor is acid and aromatic. At Miami, Florida, this plant has proved to be hardy, and has borne fruit abundantly at an early age. It is of interest principally as a possible stock for the mangosteen. (Bell, Md.)

55762. *GARCINIA MANGOSTANA*. Mangosteen. From Paris, France. Purchased from Vilmorin-Andrieux & Co. This delicious tropical fruit is about the size of a mandarin orange, round and slightly flattened at each end, with a thick, smooth, rich red-purple rind, which when cut exposes the white segments lying loose in the cup. The cut surface of the rind is a most delicate pink. The separate segments are whitish and covered with a delicate network of fibers. The texture of the pulp resembles that of the plum and the flavor is indescribably delicious. For trial in extreme southern Florida and tropical America. (Bell, Md.)

59314. *GARCINIA TINCTORIA*. From Cienfuegos, Cuba. Collected by Dr. David Fairchild, Agricultural Explorer. A rapid-growing evergreen tree from tropical Asia, bearing on the mature wood, singly or in clusters, orange-yellow fruits about 2 inches in diameter. The leathery skin incloses 3 to 5 segments of juicy flesh, each segment usually containing a large, oblong seed. The flavor is rather acid. Introduced for trial as a stock plant on which to graft the mangosteen. (Chapman Field, Fla.)

59015. *GENTIANA* sp. From Yunnan, China. Seeds collected by J. F. Rock, National Geographic Society, Washington, D. C. An alpine gentian, about a foot high, which grows wild on the Likiang Snow Range at about 12,000 feet above the sea. It has linear-lanceolate leaves and round heads of purple flowers. Should be tried in the southern and Pacific Coast States. (Bell, Md.)

62010. *GORDONIA AXILLARIS*. Theaceae. From Canton, China. Collected by F. A. McClure, Agricultural Explorer. A beautiful shrub about 10 feet high, with thick, glossy foliage and delicate, white flowers 1 to 2 inches in diameter. It should be tested in southern Florida and tropical America as an ornamental. (Chapman Field, Fla.)

58152. *HYDRANGEA PRETSCHNEIDERII*. From England. Presented by Dr. A.W. Hill, Director, Royal Botanic Gardens, Kew. A stout, bushy shrub 8 to 10 feet high, with dull-green, slender, pointed leaves and flattened corymbs, 4 or 5 inches wide, of white flowers which become rosy. This hardy hydrangea, first discovered in the mountains near Peking, China, thrives best in a sunny position in good soil. Recommended as a vigorous and handsome, ornamental shrub. Probably hardy throughout the United States. (Bell, Md.)

24638. *ILEX CORNUTA*. Holly. From northern China. Presented by Rev. J.M.W. Farnham. This holly has spiny, dark-green, glossy leaves, and in winter is loaded with clusters of scarlet berries. While it does not make as symmetrical a crown as does the native Christmas holly, *Ilex opaca*, its attractive foliage and bright-colored fruits render it a fine winter ornamental for the southern half of the United States. (Chico, Calif.)

58395. *INCARVILLEA GRANDIFLORA BREVIPES*. Bignoniaceae. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A stemless plant, native to altitudes of 9,500 to 12,000 feet, in the mountains of Yunnan, where it is the first to blossom in the spring. The dark-green, glossy leaves are lyrate and pinnately cut, while the large flowers, 2 to 3 inches broad, are deep magenta purple with yellow throats. Its hardiness is undetermined; it should be tried as far north as New York. (Bell, Md.)

59418. *INCARVILLEA LUTEA*. Bignoniaceae. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A bushy perennial 2 to 4 feet high, with large, pinnate leaves and six to twenty large, somewhat pendulous, yellow flowers in long, terminal spikes. It grows wild in limestone soil at high altitudes in southwestern China, and is probably tender north of southern Ohio. (Bell, Md.)

62185. *INDIGOFERA MACROSTACHYA*. From China. Collected by P. H. Dorsett, Agricultural Explorer. An attractive, shrubby plant with hairy foliage and long, dense racemes of pink flowers; found growing in very poor soil. Probably hardy except in the extreme north. (Bell, Md.)

59419. *INDIGOFERA PENDULA*. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. An ornamental leguminous shrub 10 to 15 feet high, with long racemes of bluish purple flowers. Native on the Likiang Snow Range at altitudes of 10,000 to 11,000 feet. For trial in the southern United States and California. (Bell, Md.)

62177. *IRIS DICHOTOMA*. From Chihli, China. Collected by P. H. Dorsett, Agricultural Explorer. A Chinese iris with a slender stem, over a foot in length, bearing six to ten flowers. The standards are whitish, spotted with lilac-blue, and the flowers open during the afternoon. (Bell, Md.)

62178. *IRIS DICHOTOMA*. From Chihli, China. Collected by P. H. Dorsett, Agricultural Explorer. (Bell, Md.)

58361. *IRIS* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. An iris about a foot high, with deep indigo-blue flowers, found growing in clumps in moist meadows on the Likiang Snow Range at about 11,000 feet altitude. (Bell, Md.)

59021. *IRIS* sp. From Yunnan, China. Seeds collected by J. F. Rock, National Geographic Society, Washington, D. C. An iris 1 to 2 feet in height, with dark-blue flowers, which grows in clumps in moist meadows on the Likiang Snow Range at an altitude of about 11,000 feet. (Bell, Md.)

57080. JUNIPERUS CEDRUS. Juniper. From England. Presented by Dr. A. W. Hill, Director, Royal Botanic Gardens, Kew. A Canary Island relative of the common juniper, which differs in being somewhat less hardy, and in having a shorter and thicker habit of growth. The wood is pleasantly perfumed. For trial in the Gulf States and California. (Savannah, Ga.)
58825. JUNIPERUS sp. Juniper. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A shrub about 8 feet high, with round, orange-red berries, which grows in rocky limestone soil at about 9,000 feet altitude. Probably tender north of southern Ohio. (Bell, Md.)
56316. KETELEERIA sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A handsome coniferous tree 50 feet high, with light-green foliage and long oblong cones, found on the Sungkow Pass of the Hocking Range, at 11,000 feet altitude. This genus of the pine family is rare in cultivation in the United States, where it should be tested. Probably tender north of southern Ohio. (Chico, Calif.)
62345. KOELREUTERIA FORMOSANA. From Taihoku, Japan. Presented by Dr. R. Kanehira, Director, Government Forest Experiment Station. One member of this genus (Koelreuteria paniculata) is widely grown as a hardy shade and ornamental tree in many parts of the United States. This species, native to Taiwan, is also a large, handsome tree, with attractive, compound leaves, and large terminal panicles of yellow flowers. It is likely, however, to prove tender to much frost, and therefore best suited for growing in the southern United States. (Chapman Field, Fla.)
60648. LAGERSTROEMIA PARVIFLORA. From Darjiling, India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden. This Himalayan relative of the crape myrtle (Lagerstroemia indica) is a tree 50 to 70 feet high, with green leathery leaves, and fragrant white flowers, one half inch wide, in axillary or terminal panicles. The wood is very tough and durable. For trial in the Gulf States and California. (Chapman Field, Fla.)
58613. LIGUSTRUM DELAVAYANUM. Privet. From England. Presented by Vicary Gibbs, Herts. A hardy shrub first discovered by Abbe Delway in the mountains of Yunnan, China. In habit it is prostrate-spreading, except for a few perfectly upright branches which rise from the center of the shrub to a height of about 10 feet. The shining dark-green foliage, which is remarkably persistent, is similar to that of myrtle, and the white flowers and blue-black fruits make the plant a handsome ornamental. Probably hardy except in the extreme north. (Bell, Md.)
56317. LIGUSTRUM IONANDRUM. Privet. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A compact, ornamental, hedge shrub, 10 to 12 feet high, found among limestone boulders on the Likiang Snow Range at altitudes of 10,000 feet. For trial in the southern half of the United States. (Chico, Calif.)

56318. *LIGUSTRUM* sp. Privet. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. This privet, from water-courses on the Likiang Snow Range at altitudes of 8,500 feet, reaches the size of a small tree. Its small, fragrant, cream-colored flowers are borne in large, compound clusters. It should be tested in the southern half of the United States. (Bell, Md. and Chico, Calif.)

56824. *LIGUSTRUM* sp. Privet. From China. Collected by J. F. Rock, Agricultural Explorer. An ornamental shrub which grows among lava boulders in southwestern China at 6,000 feet altitude. The cream-colored flowers are in large pyramidal clusters. Probably tender north or southern Chic. (Savannah, Ga.)

61495. *LINOMA ALBA*. Palm. From Tanganyika Territory, Africa. Presented by Alleyne Leechman, Director, Biological and Agricultural Institute. A slender, spineless, feather-leaved palm resembling Areca in habit, and native to tropical Asia. It is 30 feet or more in height, with the full-grown leaves 8 to 12 feet long. When young it makes a very desirable house plant. For trial in extreme southern Florida and tropical America. (Chapman Field, Fla.)

36748. *LONICERA CHRYSANTHA*. Honeysuckle. From China. Collected by Frank N. Meyer, Agricultural Explorer. A large bush honeysuckle of decidedly ornamental habit, with large, dark-green leaves, against which the yellowish white flowers and bright-red berries stand out in fine contrast. Probably hardy throughout the United States. (Bell, Md.)

57300. *LONICERA MAACKII*. Honeysuckle. From Echo, Manchuria. Presented by A. D. Woeikoff, Director, Experimental Farm. A bush honeysuckle, native to northeastern China, becoming about 10 feet in height with widely spreading branches and dark-green leaves which are downy on both surfaces. The pure-white flowers, an inch in diameter, are produced in pairs on the upper side of the branchlets. The fruits are red. Probably hardy throughout the United States. (Bell, Md.)

39697. *LONICERA MAACKII PODOCARPA*. Honeysuckle. From Nanking, China. Presented by Joseph Bailie, University of Nanking. An upright shrub native to northeastern Asia and central Japan where it occasionally reaches 15 feet in height. The large fragrant flowers are white, tinted rose, and the handsome fruits are dark red. This is remarkable as being the latest of the bush honeysuckles to bloom. The dark-green foliage and the red berries often last until late November. (Bell, Md.)

60324. *MORUS KAGAYAMAE*. From Algiers, Algeria. Presented by Dr. L. Trabut. A handsome Japanese mulberry which thrives in Algeria and whose leaves are readily eaten by silkworms. For trial in southern California. (Chico, Calif.)

30330. *MORUS NIGRA*. Black Mulberry. From Khotan, Sinkiang, China. Collected by Frank H. Meyer, Agricultural Explorer. The berries are large, dark violet-black, and have a fresh, subacid taste. They ripen from early August until the end of September. Recommended as a home fruit in desert regions under irrigation. (Chico, Calif.)

55735. *MYRICA RUBRA*. From Japan. Received from the Yokohama Nursery Co. An evergreen tree native to eastern Asia, called "yang mae" in China. The beautiful, dark-purple fruits average from one to one and a quarter inches in diameter and can be eaten out of hand or made into compotes and pies. There is great variation in the productivity of the trees, as well as in the size, color, and flavor of the fruits which generally taste of strawberry and lemon. For trial in the southern United States and in California. (Savannah, Ga.)

63629. *MYROXYLON SENTICOSUM*. From Kwangtung, China. Collected by F. A. McClure, Agricultural Explorer. A very handsome and shapely large leguminous shrub or small tree with dense, glossy foliage and an abundance of small, dark-red berries borne in short-stemmed clusters along the branches. For trial in southern California and Florida. (Chapman Field, Fla.)

50788. *MYRTUS COMMUNIS*. Myrtle. From Syria. Presented by the American Consul, Beirut. A variety known in Syria as the "Damascus myrtle." The fruits, which are sold in the markets of Beirut and Damascus, are said to be the size of olive pits, with white, melting, sweet, and deliciously fragrant flesh. This variety should be tested in the Gulf States and California. (Chapman Field, Fla.)

63552. *NERIUM OLEANDER*. Oleander. From Algeria. Collected by Dr. David Fairchild, Agricultural Explorer. An Algerian strain of the common oleander which appears to be more resistant to scale infestation than the type now grown in Florida. It should be tested in that state for scale resistance. (Chapman Field, Fla.)

61777. *OLEA CHRYSOPHYLLA*. Golden-leaved olive. From Nairobi, Kenya Colony. Seeds collected by Dr. H. L. Shantz, Agricultural Explorer. This plant, the wild olive of the highlands of East Africa, is noteworthy because of the drab or golden color of the under side of the leaves. For trial as an ornamental in the southern United States and California. (Bell, Md.)

44709. *OLEA EUROPAEA*. Fayum Olive. From Egypt. Presented by Thomas W. Brown, Director, Horticultural Division, Ministry of Agriculture, Cairo. The tefahi or "apple olive" is considered the best of the three varieties grown in Fayum. Though reputed to be only moderately productive, its large size and fine appearance cause it to be in great demand throughout the Egyptian Delta. As the flesh is very soft and buttery when fully ripe, it is marketed as soon as it begins to color (about November 1). The fruit is a deep purplish black with lilac bloom, 2 inches long, 1 1/2 inches broad (maximum), broadly oval with a blunt tip terminating in a short, sharp point. There is a rather deep cavity around the stalk and some fruits show a slight fold. The flesh is about 1/3 inch thick; the pit is large, rough, with deep longitudinal furrows. For trial in California. (Chico, California.)

56328. *OLEA* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A tree reaching 50 feet in height, with a trunk one foot in diameter covered with whitish bark, and having narrowly oblong, dark-green, leathery leaves and small, oval, bluish black fruits in clusters. Recommended for trial as an ornamental tree in the South Atlantic and Gulf Coast States and the mild coast regions of California. (Bell, Md.)

58830. *OSMANTHUS* sp. Oleaceae. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A handsome shrub from the Likiang Snow Range at an altitude of 10,000 feet. It reaches about 4 feet in height, has small, oval, serrate leaves, numerous cream-colored flowers, and ovoid, blue-black fruits. Probably tender north of southern Ohio. (Bell, Md., and Chico, Calif.)

55938. *PAPYRIUS* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A shrub or small tree 10 feet high found along streams at an altitude of 7,000 feet. It is a close relative of the paper mulberry (*Broussonetia papyrifera*), which is valued for its large, handsome foliage. For trial in all but the coldest sections of the United States. (Savannah, Ga.)

59426. *PHILADELPHUS* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A handsome shrub 8 to 10 feet high, related to the mock orange, found on the outskirts of forests at altitudes of from 10,000 to 11,500 feet. The fragrant, white flowers are produced in large racemes. Probably tender in the extreme north. (Bell, Md.)

59707. *PHILADELPHUS* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A shrub 5 to 8 feet high found growing along streams at from 9,000 to 10,000 feet altitude. It has small leaves and fragrant, white flowers. For trial in all but the coldest sections of the United States. (Chico, Calif.)

58831. *PHOTINIA* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A small tree about 10 feet high, related to the hawthorns, found growing at an altitude of about 11,000 feet. The midribs and stems of the oblong, glossy-green leaves are red, and the white flowers, produced in large clusters, are succeeded by rich-crimson fruits. Probably hardy except in the extreme north. (Bell, Md., and Chico, Calif.)

60653. *PIERIS OVALIFOLIA*. Ericaceae. From India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden, Darjiling. An ornamental shrub or small tree with thick, leathery leaves 3 to 6 inches long, and clusters of white or bluish flowers. It thrives best in light, well-drained soils free from limestone, and is probably tender north of southern Ohio. (Bell, Md.)



59022. *PIERIS* sp. Ericaceae. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A handsome shrub, 3 to 4 feet high, found in the outskirts of pine forests at about 10,000 feet altitude. The elliptical leaves are dark glossy green and the white, bell-shaped flowers are in erect spikes. Probably tender north of southern Ohio. (Bell, Md.)

59708. *PIERIS* sp. Ericaceae. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. An attractive shrub about 6 feet high which grows on the Likiang Snow Range at an altitude of 10,000 feet. It has red branchlets and short racemes of white, bell-shaped flowers. Probably tender north of southern Ohio. (Bell, Md.)

59709. *PIERIS* sp. Ericaceae. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A white-flowered shrub, native to the mountains of Yunnan at an altitude of about 11,000 feet. It should be tested as an ornamental in the South Atlantic and Gulf States, and on the Pacific coast. (Bell, Md.)

56826. *PITTOSPORUM* sp. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A shapely tree about 30 or 40 feet in height, with handsome foliage, and large terminal masses of cream-colored flowers followed by bright-red fruits. Probably tender north of southern Ohio. (Savannah, Ga.)

51877. *POPULUS MAXIMOWICZII*. Poplar. Presented by John Dunbar, Assistant Superintendent, Department of Parks, Rochester, N. Y. A very fast-growing and stately tree native to China. It will succeed in the coldest portions of the United States on the poorest and driest soils. At all times it makes phenomenally rapid growth. Its leaves, which are handsomely crinkled like those of *Rosa rugosa* appear very early in the spring and remain longer in the autumn than those of almost any other deciduous plant. The tree is not attacked by borers or leaf-eating insects; it is highly recommended as a shade tree and windbreak generally, especially for the northwest plains country. (Bell, Md.)

59023. *POTENTILLA* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. An alpine plant, found at about 10,000 feet altitude, with trifoliolate leaves and large racemes of yellow flowers. Probably hardy except in the extreme north. (Bell, Md.)

59428. *PRIMULA LITTONIANA*. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A very handsome plant 2 to 3 feet tall found in swampy meadows at about 11,000 feet altitude. The deep indigo-blue flowers, with rich-carmine calyxes, are borne in long, densely packed spikes. For trial in mild-wintered regions having an abundance of moisture. (Bell, Md.)

57087. *PRINSEPIA SINENSIS*. Rosaceae. From Ichang, China. Presented by Albert S. Cooper, American Church Mission. An ornamental deciduous shrub of spreading habit, about 6 feet high, with short, stiff spines in the axils of the oblong-lanceolate leaves. The bright-yellow flowers are over half an inch across, and the red, juicy, edible fruits, which ripen in August, are a little over half an inch long. Probably hardy throughout the United States. (Bell, Md.)

38282. *PRUNUS ANSU*. Apricot Plum. From Shantung, China. Collected by F. N. Meyer, Agricultural Explorer. This species produces a very delicious, golden yellow fruit with reddish blush. The fruit is about 2 inches in diameter. Seems to be a good shipper. For trial in the Gulf States and California. (Chico, Calif.)

20072. *PRUNUS ARMENIACA*. Apricot. From Manchuria. Collected by Frank N. Meyer, Agricultural Explorer. A handsome apricot, which at Chico, California, has ripened earlier than Blenheim and has shown unusual promise. The fruits are bright yellow, with a red cheek, freestone, with very firm flesh of excellent quality. For trial in the Pacific Coast States. (Chico, Calif.)

34265. *PRUNUS ARMENIACA*. Apricot. From Rome, Italy. Presented by Gustavus Eisen. A variety said to be a favorite in the vicinity of Frascati, in the Alban Hills near Rome. The fruits, which average nine to ten per pound, are large, elongated, and yellow. They have a deep, narrow stem-cavity, and a rather deep suture, dividing them into unequal halves; the pit is large and free from the flesh which is of decidedly good flavor. The fruits ship well and are valued for drying. Tree very large, healthy and productive. At the Plant Introduction Garden, Chico, California, the ripening season is about the middle of June. (Chico, Calif.)

34269. *PRUNUS ARMENIACA*. Crisomelo Apricot. From Boscotrecase, Italy. Presented by Gustavus Eisen. At the Plant Introduction Garden, Chico, California, where it ripens about the middle of June, this freestone apricot shows promise as a variety suitable for canning, shipping, or drying. The fruits are yellow, blotched red, with yellow flesh of very good quality. Tree of average vigor. For trial in the Pacific Coast States. (Chico, Calif.)

34270. *PRUNUS ARMENIACA*. Apricot. From Rome, Italy. Presented by Gustavus Eisen. Introduced as a form of the Crisomelo apricot. At Chico, California, the fruit is reddish yellow, with firm flesh clinging slightly to the pit when not fully ripe. The flavor is mild, subacid, and pleasing. It is one week later than Blenheim in ripening, and is thought promising as a shipping and canning variety. For trial in the Pacific Coast States. (Chico, Calif.)

40223. PRUNUS BOKHARIENSIS. Plum. From Saharanpur, India. Presented by A. C. Hartless, Superintendent, Government Botanic Garden. A plum cultivated in northern India, interesting but too small-fruited for commercial use in the United States. Its principal value in this country seems likely to be for the production of rootstocks on which to graft other varieties. The tree, which resists drought and is very attractive when in bloom, is of vigorous growth, with dense foliage which strongly resembles that of the myrobalan. The red fruits, scarcely an inch long, are pleasantly flavored and suitable for home use. At the Plant Introduction Garden, Chico, California, they mature in the latter part of July. For trial as a home fruit in regions where other plums do not succeed. (Chico, Calif.)

40229. PRUNUS BOKHARIENSIS. Plum. From Saharanpur, India. Presented by A. C. Hartless, Superintendent, Government Botanic Garden. A small plum of myrobalan type, dark purple in color, with golden flesh of good texture. The tree, which is fairly vigorous, and always healthy, matures its fruits at Chico, California, in early July. Of interest as a stock-plant on which to graft other varieties, and for cultivation in regions where other plums do not succeed. (Chico, Calif.)

40498. PRUNUS DOMESTICA. Papagone Prune. From Naples, Italy. Presented by Gustavus Eisen. This variety, which closely resembles the Silver prune, seems promising for shipping, canning and drying. Its greenish yellow, oval fruit is more than 2 inches long, and slightly bottle-necked. The pit is long, narrow and rough, free from the coarse, sweet flesh. At the Plant Introduction Garden, Chico, California, where Papagone has received preliminary trial, it matures its fruits in the latter part of July and early August. For trial in the Pacific Coast States. (Chico, Calif.)

43176. PRUNUS SALICINA. Alpha Plum. From New Zealand. Presented by H. R. Wright. A round, reddish clingstone plum weighing slightly more than one ounce, with thick, yellow, juicy flesh, and a small, round pit. The tree has been tested at the Plant Introduction Garden, Chico, California, and has shown itself a vigorous grower. The variety belongs to the Japanese group of plums. Probably hardy except in the extreme north. (Chico, Calif.)

43178. PRUNUS SALICINA. Sharp's Early Plum. From New Zealand. Plants presented by H. R. Wright. Supposed to be a seedling from Botan; fruit heart-shaped, medium-sized, purple when thoroughly ripe; tree said to be a good cropper. (Chico, Calif.)

43179. PRUNUS SALICINA. Wright's Early Plum. From New Zealand. Presented by H. R. Wright. Said to be a seedling of the Burbank plum, which it greatly resembles in general characteristics. At the Plant Introduction Garden, Chico, California, the tree is medium-sized and rather spreading in habit. The fruits are somewhat small, yellowish red, firm, and of good flavor. They promise to be satisfactory for home use in all but the coldest sections. (Chico, Calif.)

43180. PRUNUS SALICINA. Wright's Early Plum. From New Zealand. Presented by H. R. Wright. A very attractive, red-skinned plum of medium size, belonging to the Japanese group. In weight the fruits average about an ounce; the flesh is yellow and of pleasing flavor. Tree rather inclined to be small and spreading; leaves very broad. At Chico, California, this variety ripens in late June. Probably hardy except in the extreme north. (Chico, Calif.)

43182. PRUNUS SALICINA X CERASIFERA. Best's Hybrid Plum. From New Zealand. Presented by H. R. Wright. A productive, vigorous variety, with dark green, dense foliage, and heart-shaped, greenish yellow fruits of medium size. Flesh yellow, juicy, and of fine flavor. Of possible value for shipping and canning. Ripens at Chico, California, late in June. Probably hardy except in the extreme north. (Chico, Calif.)

31652. PRUNUS SALICINA X CERASIFERA MYROBALANA. Methley Plum. From Natal, South Africa. Presented by W. J. Newberry, Curator, Botanic Gardens. This plum has attracted wide and favorable comment in California and Texas. In Butte County, California, it began bearing at two years from planting, maturing its fruits late in May. In Texas where it has withstood severe drought and low temperatures, matures early in May, and is perhaps the earliest ripening plum in the country. The fruits are of good size, about fifteen to the pound, with dark greenish red skin and firm, dark-red flesh of the finest texture and of pleasant flavor, and are excellent for shipping. Thrives on peach stock. (Chico, Calif.)

32670. PRUNUS SPINOSA X DOMESTICA. Hybrid Plum. From Kozlov, Russia. Presented to F. N. Meyer, Agricultural Explorer, by the plant breeder, I. V. Mijurin. A hybrid between the Green Reine Claude and the Sloe (*P. spinosa*) a hardy spiny bush of Europe, Persia, North Africa, and Siberia. This hybrid produced small, dark purplish, clingstone fruits with a touch of green, flattened in shape, and of a slightly astringent flavor resembling that of the damson. Of good keeping quality and suitable for jam. Reported reasonably hardy in North Dakota. On Lovell peach stock. For trial in northern United States where Lovell stock is hardy. (Chico, Calif.)

32673. PRUNUS SPINOSA X DOMESTICA. Hybrid plum. From Kozlov, Russia. Presented to F. N. Meyer, Agricultural Explorer, by its originator I. V. Mijurin. Fruits of medium size, freestone, greenish yellow, covered with a heavy bloom. Flesh firm; rather dry but of good flavor. Excellent for canning and shipping. A hybrid between the Green Reine Claude and the Sloe (*P. spinosa*). At Chico, California, this plum has a longer fruiting season than other varieties, ripening during late June and July. Worthy of trial in our coldest regions. On Lovell peach stock. For trial in northern United States where Lovell stock is hardy. (Chico, Calif.)

47935. PRUNUS sp. Hybrid plum. From New Zealand. Presented by H. R. Wright. Wilson's Early is said to be the earliest hybrid plum grown. The round-flattened, dark-purple fruits are said to be good for shipping. Probably hardy except in the extreme north. (Chico, Calif.)

55941. PRUNUS sp. Plum. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A small tree found along streams on the Likiang Plain at altitudes of 9,500 to 10,000 feet. The round, lemon-yellow fruits are about an inch in diameter. The tree is a prolific bearer and grows on alkaline soil. It may not prove hardy in northern parts of this country. (Chico, Calif.)

56121. PRUNUS sp. Plum. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. This small tree is found growing wild along brooks in the mountains, at an altitude of 6,000 feet. The globose, yellow, clingstone plums are little more than an inch in diameter, with firm rather sour flesh. Introduced mainly for trial as a stock plant in the southern half of the United States. (Chico, Calif.)

61769. PSIDIUM GUAJAVA. Guava. From Holguin, Cuba. Presented by Thomas R. Towns. A fine large guava with golden-green skin and yellow pulp of very sweet flavor. The shrub is vigorous and prolific. For trial in the warmest parts of California and Florida. (Chapman Field, Fla.)

13298. PUNICA GRANATUM. Pomegranate. Of unknown origin. This beautiful, large, red-mottled fruit has medium-sized, vivid red pulp of a sharp and vinous flavor. The skin is thick but inclined to split. Ripens at Chico, California, late in October or early in November. For trial in the Gulf States and California. (Chico, Calif.)

33227. PUNICA GRANATUM. Pomegranate. Var. Negro Monstruoso. Obtained from Granada, Spain, by Dr. Walter T. Swingle. One of the principal varieties grown in the vicinity of Granada, Spain; of the "Spanish Sweet" type. The fruits are about 3 inches long and wide, deep purplish red to a deep cream color, with pulp of splendid flavor. For trial in the Gulf States and California. This has proved an excellent variety in California, where it ripens early in November. (Chico, Calif.)

33229. PUNICA GRANATUM. Rogises Pomegranate. From Granada, Spain. Presented by Pedro Giraud. In the neighborhood of Granada are cultivated the finest Spanish pomegranates, and many of the early introductions of this fruit into California in the days of the Spanish occupation were brought from that region. From the same source comes this attractive fruit, which is considered by many as one of the finest of pomegranates. It is of medium size, thin-skinned, highly colored and contains pink, sweet pulp, with soft seeds. Ripens at Chico, California, about the first of November. For trial in the Gulf States and California. (Chico, Calif.)

59648. PUNICA GRANATUM. Pomegranate. From Soledad, Cuba. Cuttings collected by Dr. David Fairchild, Agricultural Explorer. An attractive double-flowered variety, which might be useful as a pot plant. For trial in the Gulf States and California. (Bell, Md.)

40736. *PYRACANTHA CRENULATA KANSUENSIS*. Malaceae. From Kansu Province, China. Collected by Frank N. Meyer, Agricultural Explorer. A small shrub, with fine foliage and orange-colored berries of attractive appearance. It grows on stony mountainsides in China, and is recommended for those parts of the United States where the winters are mild. (Chico, Calif.)

54991. *PYRACANTHA CRENULATA YUNNANENSIS*. Malaceae. Fire-thorn. Secured through Vilmorin-Andrieux and Co., Paris, France. A handsome ornamental shrub or small tree, native to the mountains of southwestern China. It has bright-green leaves and bears in fall and winter a multitude of red berries. The variety *yunnanensis* differs from the tropical *P. crenulata* in being more vigorous, and in having much longer spines and less dentate leaves. The fruits are smaller but are brighter colored and more abundant. Probably hardy as far north as Philadelphia. (Chico, Calif.)

55996. *PYRACANTHA* sp. Malaceae. Fire-thorn. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A shapely ornamental shrub 10 to 15 feet high found growing along stream beds. It is covered with bright-scarlet berries from August until winter. Probably hardy as far north as Philadelphia. (Chico, Calif.)

55997. *PYRACANTHA* sp. Malaceae. Firethorn. From Yunnan, China. Collected by J. F. Rock, Agricultural Explorer. A dense shrub, 6 to 8 feet high, which grows in arid situations in the valleys south of Likiang. It has bright-yellow berries instead of the scarlet fruits so common in this genus. Probably tender north of southern Ohio. (Bell, Md., and Chico, Calif.)

*PYRUS* spp. Blight-resistant pears. The following pears have been tested for a number of years and are believed to be worthy of more extended trial, especially in the southern United States where fire blight is usually severe. Scion wood for top-working bearing or near-bearing trees only will be furnished. The top working should be done just before the buds begin to push in spring. At least two trees of each kind should be top worked. Young, vigorous-growing trees of varieties such as LeConte, Kieffer, or any of the so-called sand pears will serve for material to be top worked. Detailed directions will be sent on application.

Scion wood of the following pears is available for distribution:

33207. *PYRUS COMMUNIS*. Favorita Pear. A pear, closely resembling Clapp Favorite, introduced from Granada, Spain, in 1912. Fruits are uniformly smooth and of excellent quality. Tree large and vigorous, having smooth, beautiful bark, and so far has suffered very little from blight at several of our testing gardens. Matures ahead of Bartlett and is a fine, sweet, juicy dessert pear. (Chico, Calif.)

30352. PYRUS sp. Nanshi'pt. Pear. Collected by Frank N. Meyer in Sinkiang, China, in 1910. The fruit is of medium size, borne on long slender stems; flesh sweet and juicy, slightly gritty. This pear is a good keeper and may prove to be a good canner. Matures in August and September and is good until frost. (Bell, Md. and Chico, Calif.)

38263. PYRUS sp. Pin li Pear. From Wulipu, Honan, China, where it was collected by Frank N. Meyer. Fruits are of medium size and with deep golden-yellow color; the flesh is yellowish, rather coarse, granular, fairly juicy. Matures in August and is a good keeper. (Chico, Calif. and Bell, Md.)

55805. PYRUS sp. Van Fleet hybrid Pear. A hybrid probably between Golden Russet, an Oriental pear, and one or more of the Pyrus communis types. A handsome golden-colored variety which, when properly ripened, bakes and preserves well. The trees are strong and vigorous, with large, thick, golden leaves. Matures in September and keeps well. (Bell, Md. and Chico, Calif.)

56491. PYRUS sp. Pear. From Yunnan, China. Obtained by Miss Clara Petersen for J. F. Rock, Agricultural Explorer. A vigorous tree from the mountains of Puerhfu. The white flowers are borne in great profusion and the fruits remain for a long time on the tree, turning black and sweet when ripe. This species is used in southern Yunnan as a stock for cultivated pears, and should be tested for that purpose by plant breeders in the southern half of the United States. (Savannah, Ga.)

64224. PYRUS sp. Pear. A hybrid pear produced by Dr. Walter Van Fleet. It is a cross between a Chinese pear and one or more of the Pyrus communis types. The pear is a selection from original trees grown at the Plant Introduction Garden, Chico, California, and numbered S. P. I. 28497. Fruits of medium size, slightly irregular, with stems one-half to two inches long. The flesh is firm, somewhat coarse and granular. The blight-resistant qualities and productiveness of this pear would seem to make it worthy of trial in the southern United States. Matures in August. (Bell, Md. and Chico, Calif.)

57311. RHAMNUS DAVURICA. Buckthorn. From Echo, Manchuria. Presented by A. D. Woeikoff, Director, Experimental Farm. A shrub or small tree, up to 30 feet in height, with more or less arching branches which are often thornless. The oblong or oval leaves are slender-pointed and finely toothed. The black fruits, in dense clusters, are about 1/4 inch in diameter. Of value for rough shrubberies. Probably hardy throughout the United States. (Bell, Md.)

62230. RHAMNUS DAVURICA. From China. Collected by P. H. Dorsett, Agricultural Explorer. A large, spreading shrub having rather small, deep-green leaves and numerous small, purple or black fruits. The branches are stout and thorny, and the oblong, leathery leaves are grayish green beneath. It is native to northern China and Siberia, and is probably hardy throughout the United States. (Chico, Calif.)

44401. *RUBUS IRENAEUS*. From China. Presented by Hon. Vicary Gibbs, Elstree, Herts, England. An evergreen, prostrate shrub with numerous small prickles and dark-green, bristly-margined leaves. The berries are large and red. Probably tender in the extreme northern United States. (Savannah, Ga.)

61622. *RUBUS NIVEUS*. From Darjiling, India. Presented by G. H. Cave, Curator, Lloyd Botanic Garden. A subtropical raspberry distributed throughout eastern India, Ceylon, and Java. The berries, which vary in color from red and orange to bluish, are very palatable and are commonly sold in the Indian bazaars. For trial by plant breeders in the southern United States and California. (Chapman Field, Fla.)

55630. *RUBUS* sp. Bramble. From southern China. Presented by F. A. McClure, Canton Christian College. An edible wild berry found in sandy soil near sea level, on the Island of Hainan. It is introduced for the use of plant breeders in the Gulf States and California. (Savannah, Ga.)

61852. *SALIX* sp. Willow. From China. Collected by P. H. Dorsett, Agricultural Explorer. An upright growing willow found along streams. For trial throughout the United States. (Bell, Md.)

59640. *SCABIOSA* sp. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. An herbaceous plant found in alpine meadows at 11,000 feet altitude, with a rosette of lanceolate leaves and small, white flowers produced in drooping, globose heads. It is related to the teasel. Probably tender north of southern Ohio. (Bell, Md.)

62673. *SCHINUS TEREBINTHIFOLIUS*. From Algeria. Collected by Dr. David Fairchild, Agricultural Explorer. A handsome strain of the Brazilian pepper-tree which is grown as a shade tree in Algeria, and appears to differ from the shrubby form now grown in southern Florida. To be tested in that state as an ornamental shade tree. (Chapman Field, Fla.)

57314. *SCHIZANDRA CHINENSIS*. Magnoliaceae. From Echo, Manchuria, China. Presented by A. D. Woeikoff, Director, Experimental Farm. A trailing shrubby vine, often 30 feet in length, with small clusters of red, sour berries. For trial as an ornamental porch or trellis cover in the colder sections of the United States. (Bell, Md.)

59641. *SOPHORA DAVIDII*. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A spiny leguminous shrub 6 to 10 feet high, with graceful, compound leaves, and bluish violet flowers. It is common in central and southwestern China in arid regions 8,000 to 10,000 feet above the sea. Probably hardy except in the extreme north. (Bell, Md.)



40597. *SORBARIA ARBOREA*. Rosaceae. Originally from China. Plants presented by Vicary Gibbs, Elstree, Herts, England. A handsome, upright shrub with rather large, bright-green, compound leaves and small, white flowers in large, showy panicles, which appear in summer and are followed by small, capsular fruits. The handsome foliage develops very early in the spring. The species thrives in a rather moist, rich soil and does well in somewhat shaded situations. May be propagated by hardwood cuttings, root cuttings, suckers, or seeds. Probably hardy except in the extreme north. (Bell, Md.)

61954. *SPIRAEA DASYANTHA*. From China. Collected by P. H. Dorsett, Agricultural Explorer. A very free-flowering, rather dwarf shrub found on Precious Spring or Water Mountain in Chihli, China. The underside of the ovate leaves and the stems of the clusters of white flowers are covered with dense grayish white tomentum. Probably hardy throughout the United States. (Bell, Md.)

58020. *STRYCHNOS GILLETII*. From Kisantu, Belgian Congo. Presented by Father J. Gillet. A spiny shrub closely related to the Kafir orange (*S. spinosa*), native to the Belgian Congo. The shining, leathery leaves are oblong oval, and the round fruit, about 2 inches<sup>in</sup> diameter, can be eaten. The plant is of slow growth, and is suitable for cultivation in botanic gardens and plant collections in southern Florida, the West Indies, and the Tropics generally. (Bell, Md.)

59297. *SUTHERLANDIA FRUTESCENS*. From Amsterdam, Netherlands. Presented by the Director, Botanic Garden. A leguminous shrub about 3 feet in height having showy scarlet flowers produced in short axillary racemes. The bladderlike pods are sometimes over 2 inches long. Native to South Africa. For trial in the southern half of the United States. (Chico, Calif.)

38829. *SYRINGA MICROPHYLLA*. Lilac. Collected by Frank N. Meyer, Agricultural Explorer. A small, slender, free-growing shrub with small leaves and rather narrow clusters of small, pale rose-colored, fragrant flowers. It flowers the middle of June, with sometimes a second flowering period during October. Probably hardy throughout the United States. (Bell, Md.)

62492. *SYRINGA* sp. Lilac. From China. Collected by P. H. Dorsett, Agricultural Explorer. A lilac 6 to 8 feet tall found growing on a hillside. Flowers not seen. (Chico, Calif.)

58427. *TROLLIUS* sp. Ranunculaceae. From Yunnan, China. Collected by J. F. Rock, National Geographic Society, Washington, D. C. A showy plant about 2 feet high, with basal leaves and deep golden-yellow flowers about 2 inches broad. Since it comes from alpine meadows in Yunnan, it will probably require peaty soil with plenty of moisture; the altitude at which it was found, 12,000 feet, indicates that it may be sufficiently hardy for cultivation as far north as Philadelphia. (Bell, Md.)

57380. VERONICA HUIKEANA. One of the shrubby New Zealand veronicas, somewhat loose and straggling in habit, and reaching to 5 or 6 feet in height. The leaves are wedge-shaped, 1 to 2 inches long, glossy green; flowers small, lavender or lilac, in panicles sometimes a foot in length. In England, where it is too tender for outdoor cultivation except in the mildest-wintered regions, it is recommended as a species of remarkable beauty and distinction. Should be tested in the southern United States and on the Pacific coast. (Chico, Calif.)

55950. VIBURNUM sp. From Yunnan, China. Seeds collected by J. F. Rock, Agricultural Explorer. A shrub 5 to 8 feet high found on the Likiang Snow Range at about 10,000 feet altitude. It is covered, in early spring, with cymes of white flowers, which are followed by drooping clusters of rich red-crimson berries; these ripen after the first frost and remain firm for two months. They are quite acid and are used for jams and jellies. Probably hardy except in the extreme north. (Bell, Md.)







